

**MODULES FOR CONTINUING EDUCATION
OF MEDICAL OFFICER OF
PRIMARY HEALTH CENTRE**



**RURAL HEALTH DIVISION
DIRECTORATE GENERAL OF HEALTH SERVICES
MINISTRY OF HEALTH AND FAMILY WELFARE
GOVERNMENT OF INDIA**

1990

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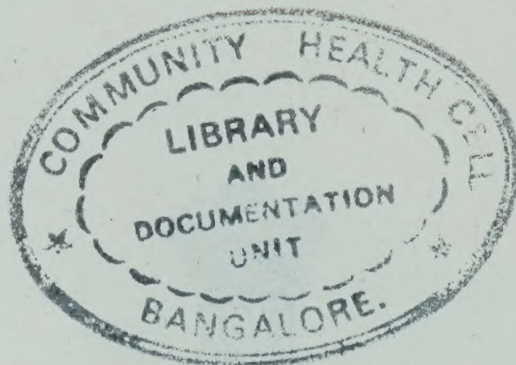
MODULES FOR CONTINUING EDUCATION

OF MEDICAL OFFICERS OF

PRIMARY HEALTH CENTRES

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FOREWORD

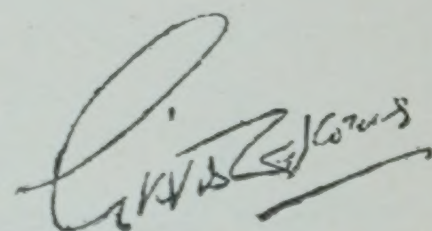
The Rural Health Division, Directorate General of Health Services, is constantly engaged in making all-out efforts to provide primary health care as per the actual needs, priorities and at an affordable cost to the underserved rural people.

Considering the advances made in the field of science and technology and in all disciplines of medicine, it is imperative for the custodians of health to update the knowledge and managerial skills of all health functionaries engaged in the delivery of health care. It is considered that an effort in this direction is only possible through continuing education programmes.

The Continuing Education Module of Medical Officer of Primary Health Centre has been prepared, covering all aspects of primary health care. This module is quite exhaustive and has been compiled keeping into consideration the principles of health care, needs of the community and latest trends in the fields of health and managerial techniques.

The contents of this module would considerably facilitate the Medical Officers incharge of primary health centres in improving their knowledge and managerial skills. This module would also help the course facilitators while organising field training programmes.

I hope the health administrators and institutions engaged in organising health training course will appreciate the efforts put in by the Rural Division in compiling this module and would utilise this effectively in updating the knowledge and skills of health functionaries responsible to deliver primary health care service in the rural areas.



(Dr. G.K. Vishwakarma)
Director General of Health Services

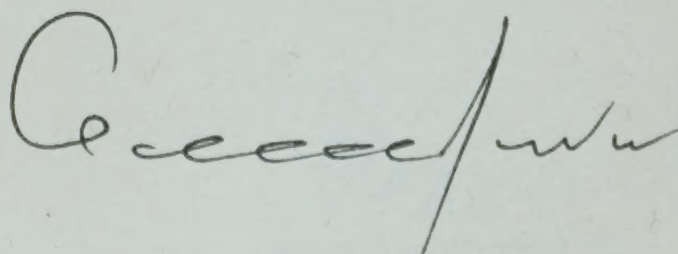
Dated: 12.3.90

PREFACE

The module is a self-contained unit of learning and usually contains hand-outs or essential reading material for the participants. These modules are for the continuing education of the Medical Officers of Primary Health Centre for the purpose of updating their knowledge and skills on National Health Programmes and improving their managerial capabilities. The design of the module make ample provision of time for the participants to identify their problems and relating their experiences in finding solution to them. The duration of the programme is 70 hours but it can be spread over 10 days or 12 days depending upon the situation and convenience of the trainer. The place of training can be Health & Family Welfare Training Centres with the assistance of faculty from the Medical Colleges for discussing the management of health problems and emergencies and medico-legal problems.

The draft module has been prepared by Dr. (Mrs) Sarah Rao in which she has adopted a lot of portion from Management Training Modules for Medical Officers, printed by National Institute of Health and Family Welfare. The above module was pre-tested by Health & Family Welfare Training Centres Bangalore and Nagpur. Finalisation of this module was done by Dr.(Mrs) K. Kathpalia, ex-OSD (Training) of this Division for which I would like to express my sincere thanks to them. All the National Health Programme Officers have contributed towards the information for their programme for which I am indebted to them for their cooperation. I am also grateful to Mr. S.D. Yadav, ex-Assistant Editor, Central Health Education Bureau who has untiringly helped in proof-reading and editing of the book.

I am also grateful to World Health Organisation for providing financial assistance in preparation, publication and distribution of this series of continuing education of primary health care staff.



(Dr. A. Mazumdar)
Deputy Director General (RHS)

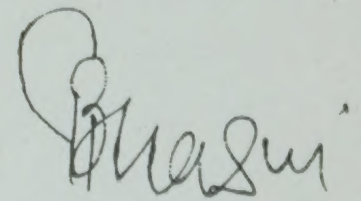
INTRODUCTION

The Modules for Continuing Education of Medical Officers of Primary Health Centre has been prepared for the purpose of updating their knowledge and for improving their managerial skills. These modules are trainer oriented and enough content is provided so that Medical Officer can also use them as self-instructional material. Part I contains the Trainer module which contains the following elements:

- a. Preamble
- b. Objectives
- c. Duration
- d. Contents
- e. Teaching methods and teaching aids
- f. Teaching Activities
- g. Notes for the Trainers

The Hand-outs are given in Part II of the module. The duration of each module has been suggested but the actual teaching may be carried out according to the convenience of the trainer. The trainers are required to study the introductory text before going into the individual module. They may also refer to the Management Training Module for Medical Officers of Primary Health Centre and National Health Programme Series printed by National Institute of Health and Family Welfare. Before starting a training programme using these modules, trainers should adapt them to set their own unique way of training as well as to meet the training needs of the participants. These modules are mostly based upon the practical exercises and field work for which the trainer should precisely work out modalities. Sufficient copies of hand-outs should also be prepared to be given before the lectures. The hand-outs should be updated from time to time.

Any suggestion about the improvement of the manual will be welcome and may please be sent to the undersigned directly.



(Dr. (Mrs.) T. Bhasin
Assistant Commissioner (RHS)

Dated: 12.3.90

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CONTINUING EDUCATION MODULES FOR MEDICAL OFFICER (PHC)

Series	Module No.	Title	Lecture discussion (Hr.min)	Group discussion/ Exercise (Hr.min)	Clinical (Hr.min)	Field (Hr.min)	Evaluation (Hr.min)	Total (Hr.min)
1	2	3	4	5	6	7	8	9
1.0	PRIMARY HEALTH CARE							
	1.1	Primary Health Care and Targets of Health for All by 2000 AD	1					1
Sub-Total			1					1
2.0	MANAGEMENT							
	Quiz—precourse Test							
	2.1	Introduction to Management		2				2
	2.2	Planning PHC Health Services		2				2
	2.3	Implementation and coordination of PHC services		1				1
	2.4	Monitoring, Control and Evaluation of PHC Health services	1					1
	2.5	Supervision	30 min.	30 min.				1
	2.6	Team work	30 min.	30 min.				1
	2.7	Leadership and Motivation	30 min.	30 min.				1
	2.8	Functional Responsibilities						
	2.8.1	Financial Management	30 min.	30 min.				1
	2.8.2	Materials Management	30 min.	30 min.				1
	2.8.3	Vehicles Management	30 min.	30 min.				1

1	2	3	4	5	6	7	8	9
	2.9	Management Information and Evaluation System		1				1
Sub-total			4 Hr.	9 Hr.				13 Hr.

3.0 INFORMATION EDUCATION COMMUNICATION

	3.1	Information Education and Communication	1	1				2
Sub-Total			1	1				2

4.0 MCH AND FAMILY WELFARE

	4.1	National Family Welfare Programme	1	—				1
	4.2	Family Planning Services	1	1				2
	4.3	Maternal and Child Health Programme	1	1				2
	4.4	Approach to infant and Child Care	1	1				2
	4.5	Universal Programme of Immunisation	1	—				1
	4.6	Malnutrition in Pre-school Child	1	—				1
	4.7	School Health Programme	1	—				1
Sub-Total			7	3				10

5.0 NATIONAL HEALTH PROGRAMMES

	5.1	National Malaria Eradication Programme	1	1				2
	5.2	National Filaria Control Programme	—	1				1
	5.3	National Leprosy Eradication Programme	1	1				2
	5.4	National Tuberculosis Control Programme	30 min.	30 min.				1

1	2	3	4	5	6	7	8	9
	5.5	National Programme for Prevention of Visual Impairment and Control of Blindness	1					1
	5.6	National Diarrhoeal Diseases	30 min.	30 min.				1
	5.7	National Goitre Control Programme	1					1
	5.8	Sexually Transmitted Diseases Control Programme		1				1
	Sub-Total		5	5				10
6.0 TRAINING								
	6.1	Management of Training Programmes at PHC	—	2				2
	Sub-Total			2				2
7.0 MEDICO-LEGAL PROBLEMS								
	7.1	Medico-legal Problems	2					2
	Sub-Total		2					2
8.0 DEVELOPMENTS IN THE MANAGEMENT OF HEALTH PROBLEMS AND EMERGENCIES								
	8.1	Medicine						
	8.1.1	Resuscitation			1			1
	8.1.2	Chest Pain			1			1
	8.1.3	Cardiac Arrest			1			1
	8.1.4	Syncope			30 min.			30min.
	8.1.5	Shock			30 min.			30min.
	8.1.6	Epilepsy and Childhood Convulsions			1			1
	8.1.7	Meningitis			1			1
	8.1.8	Cerebral Malaria			1			1
	Sub-Total				7			7

1	2	3	4	5	6	7	8	9
8.2 PAEDIATRICS								
8.2.1	Neurological Emergencies	—		30 min.				30 min.
8.2.2	Respiratory Problems in Children				30 min.			30 min.
8.2.3	Hyperpyrexia				30 min.			30 min.
8.2.4	Poisons			30 min.				30 min.
Sub-Total				1	1			2

8.3 SURGERY								
8.3.1	Acute Abdomen				1-30			1-30
8.3.2	Head Injury				1-30			1-30
8.3.3	Acute Retention of Urine	1						1
8.3.4	Fractures Basic Principles of Management				1-30			1-30
8.3.5	Burns				1-30			1-30
Sub-Total				1	6			7

8.4 OBSTETRICS AND GYNAECOLOGY								
8.4.1	Bleeding per vaginum	1-30						1-30
8.4.2	Abnormal labour	1-30						1-30
8.4.3	Fertility Control latest development	1						1
8.4.4	Medical Termination of Pregnancy				2			2
8.4.5	Antenatal and Post natal Emergencies			1				1
Sub-Total				4	1	2		7

8.5 OPHTHALMOLOGY								
8.5.1	Acute Red Eyes				30 min.			30min.
8.5.2	Injury				30 min.			30 min.
Sub-Total					1 hr.			1 hr.

1	2	3	4	5	6	7	8	9
	8.6	EAR, NOSE, THROAT						
	8.6.1	Discharging Ear			30 min.			30 min.
	8.6.2	Severe Epistaxis			30 min.			30 min.
	8.6.3	Foreign Body in the Throat, Ear, Nose			30 min.			30 min.
	8.6.4	Stridor			30 min.			30 min.
Sub-Total					2			2
	8.7	ANTIBIOTICS						
	8.7.1	Antibiotics—latest developments	1					1
Sub Total			1					1
	8.8	MENTAL HEALTH	1					
Sub-Total			1					1
Grant Total			27	22	19			68

Pre and post evaluation
Total duration

1 hour each
70 hour

PART I MODULES

1.0 PRIMARY HEALTH CARE

Module 1.1	Primary Health Care and Targets for Health for All by 2000 A.D.
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PREAMBLE

Primary or essential health care is the first level of contact of individuals, the family and community with the health system, bringing health care as close as possible to where people live and work; it is the first element of a continuing health care process. It needs the participation of people at local level in the planning and implementation of the programme.

Before the M.O. (PHC) can provide the guidance and supervision in a meaningful way to his health workers and supervisors, he must understand the concept of Primary Health Care and what it seeks to achieve in terms of goals and targets in his area.

OBJECTIVES

The M.O. should be able to :

1. Define Primary Health Care and explain its significance for the ultimate goals of Health for All by 2000 A.D.
2. Describe the contribution that he and his team at PHC can make to achieve these goals.

Duration 3 hours

Content	Method	Aids
1. Primary Health Care; Health for All by 2000 A.D and Health Services Organisation	Lecture Discussion	Slides/charts as required. Handouts 1.1.1, 1.1.2, and 1.1.3
2. Contribution that M.O. and his team can make to achieve Health Goals. For example, the following three goals may be specified: a) Reduce infant mortality rate from 106 to below 60. b) Reduce pre-school child mortality rate from 20-24 to 10. c) Reduce crude birth rate from 29.5 to 21.0	Group Exercise 1.1.1. and presentation of reports	

TEACHING ACTIVITIES

		Time
1.1.1	A specialist will speak on the first objective for 20 minutes and this will be followed by general discussion for 15 minutes. Handout 1.1, 1.2 and 1.3 will be distributed to the participants before the session.	20 min.
1.1.2	The participants will be divided into 3 groups. Each group will discuss one of the goals as indicated in item 2 of the contents: (Refer Trainer Notes 1.1.2)	30 min.
1.1.3	The participants will reassemble and present the points of their exercise. General discussion will follow after each report.	10 min.

Exercise 1.1.1**SUGGESTED SOLUTION**

"To reduce infant mortality rate from 106 to below 60"

<i>Activity</i>	<i>Personnel</i>
(1) Identify prenatal cases and educate them about the need for regular check-up	H.A. (M+F) H.W. (M+F) Trained Dai Health Guide
(2) Regular check-up	M.O. H.A.(F) and H.W.(F) Trained Dai.
(3) Identify high risk cases and refer them to PHC/Hospital	M.O. H.A.(F) and H.W.(F) Trained Dai.
(4) Prophylaxis against anaemia	H.A.(F) and H.W. (F) Trained Dai Health Guide
(5) Immunisation	H.A.(F) & H.W.(F)
(6) Health and Nutrition Education and care during pregnancy	M.O. H.A.(F) and H.W.(F) Trained Dai Health Guide
(7) Training of Dais and so on	

TRAINERS NOTES

- 1.1.1 In the first session, a P.S.M. specialist or a State level Health Officer will speak on the first objective emphasising the role of the M.O. and his team in achieving the goals of 2000 AD. After this session, the participants will be given Handouts 1.1., 1.2 and 1.3.
- 1.1.2 For Exercise 1.1.1, the participants will be divided into 3 groups. Each group will be given one goal of 2000 AD as indicated in item 2 of contents. Groups will work on their respective goals with reference to the activities that the M.O. and his team will have to perform to achieve that goal. An example of kind of analysis to be done for the goal "to reduce the infant mortality rate" is given as Exercise solution on the next page.
- The same procedure will be followed by the other two groups. This exercise will help the MO to understand how important a role he and his team have to play, so that the community/country achieves the goals of 2000 AD.

2.0 HEALTH MANAGEMENT

MÓDULO 2.1 Introduction to Management

PREAMBLE

Medical officers at the primary health centre tend to consider themselves as exclusively medical professionals, not as managers. Yet, many of their job responsibilities are managerial in nature and require knowledge, skills and attitudes specific to management.

This module provides training inputs for medical officers of primary health centres to appreciate their managerial roles and enhance their ability to utilise the resources—human and material—entrusted to them to produce results expected to them.

OBJECTIVES

The medical officer should be able to :

1. Define management and explain the basic functions of management.
2. Explain how a manager uses creative thinking and innovation.
3. Identify medical officer's managerial functions and distinguish between managerial and technical functions.

Duration: 2 hours

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Definition and functions of management	General discussion	Handout 2.1.1 Chalk, Board
2. Techniques for creative thinking and innovation	Exercise 2.1.1 and discussion	Box of Matches and Chalk, Board
3. Technical versus managerial roles of medical officer	Group Exercise 2.1.2 and discussion	Handout 2.1.2 and Chalk, Board
4. Job description and task analysis of a medical officer	Lecture discussion	

TEACHING ACTIVITIES

	Time
1. The participants will come prepared to discuss Handout 2.1.1 on Management. Define management (see suggested discussion material in Trainer Notes 2.1.1)	15 min.
2. Begin Exercise 2.1.1 on Creative Thinking and Innovation. Remind participants that innovation is one of the management functions, proceed to demonstrate it.	30 min

First use the '9-Dot Game' then the 'Matchstick Game' and finally the 'Creative thinking Game' (See instructions for these games in Trainer Notes 2.1.2). In addition to demonstrating creative thinking, these games serve as 'ice breakers'. This becoming acquainted is very important because it leads to effective group work.

3. Begin exercise 2.1.2. Technical vs Managerial roles of a Medical Officer. Divide the participants into small groups. They should make a list of technical functions and managerial functions based on their experience. Distribute copies of Handout 2.1.2 for participants to use during the group work. 45 min.
4. Reassemble the class. Write a summary list of technical and managerial functions prepared by the class on the board. Show the close relationship between technical and managerial functions and on the differences and similarities between the MO's technical and managerial functions. Use examples from the Task Analysis in Trainer Notes 2.1.3 and 2.1.4 to illustrate managerial responsibilities of medical officers. 15 min.
5. Summary and evaluation of learning on Module 2.1. Ask one participants to summarise what he/she has learned and how he/she plans to use it at the PHC. Comments from other participants and discussion on them should follow until the Trainer is satisfied that the objectives of the module have been achieved. 15 min.

TRAINER NOTES

2.1.1: Discussion Material

Management is action oriented. It presupposes mobilising, protecting and utilising human and material resources. Management is also concerned with effective and efficient use of resources.

Effectiveness : Refers to the quantum of output with quality built into it.

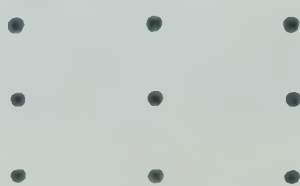
Efficiency : Refers to utilising resources of which time is most important. This will also decide whether more resources are required for achieving a particular objective or less to avoid wastage.

Operations Management focusses on the practical, day-to-day operations of a health facility of health programme. These modules emphasize operations management.

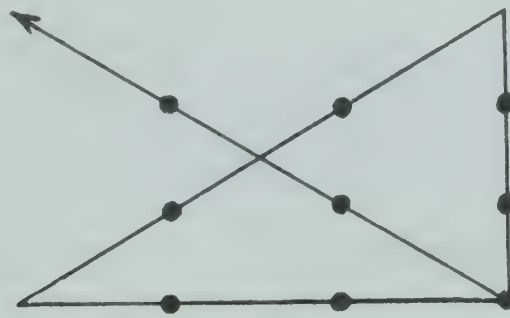
2.1.2: Instructions for Exercise 2.1

Creative thinking and innovation are both problem-solving skills, and problem-solving is something that medical officers do every day. Begin by using the 9-Dot Game.

The 9-Dot Game. Ask each participant to work along. First, draw nine dots on a piece of paper as shown here:

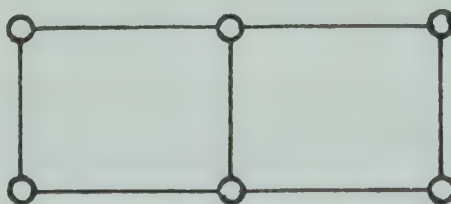


Now, tell them to connect all the dots using only four straight lines, and not lifting their pencil from the page once they start. Allow them 3-5 minutes to struggle with this problem. Ask someone to illustrate the answer on the board with chalk.

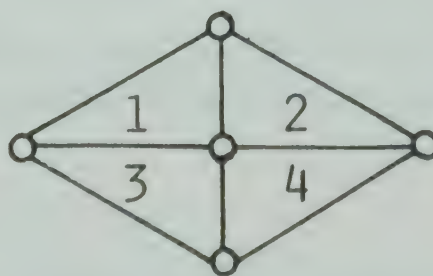


Ask why they failed. Because they assumed that they had to remain within the dots. Yet the instructions did not say to remain within the dots. We all have a tendency to 'Stay within the dots' in our thinking. Creativity and innovation means going outside the dots. In fact, the solutions to many, many problems faced by medical officers means going 'outside the dots', yet too often they assume that they cannot go outside. So they remain 'inside the dots' searching for solutions that lie outside. The result is frustration, embarrassment, and failure just like in the 9 dot game. The important point to emphasize: medical officers must look beyond the standard boundaries and limits in their thinking in order to be creative, innovative and effective managers.

Match-stick Game: You may give them a second chance to be creative. Distribute eight (8) wooden matchsticks to each participant. Tell each participant to arrange seven (7) of the matchsticks as shown in the diagram:



They may be asked to use the 8th matchstick and construct four (4) regular polygons (equal sides). No matchsticks may cross. Allow 3-5 minutes to struggle with this problem. Ask some one to illustrate the answer on the chalkboard.



Note: There are several false 'solutions', forming irregular polygons (unequal sides).

The solution required that the original diagram be abandoned (going beyond established boundaries) and also a willingness to experiment, to fail, and to experiment again. Medical officers must be willing to experiment—be creative and innovative—in solving problems at a PHC. They must also be willing to fail repeatedly until they hit upon a solution to a problem. We all dislike failure and avoid it. Yet we all wish to be creative and solve problems. Point out that a medical officer who is creative and innovative in solving problems is also going to have failures until he hits upon the right solutions.

Creative Thinking Game: Select any available object in the classroom (chalk, board, eraser, pointer etc.) and tell participants to work alone and write all the possible uses for this object. Encourage participants to be creative in their thinking, and to make long lists. Allow 5-10 minutes for this part of the game.

Now divide participants into small groups. Each group works for 10 minutes to list all the uses for the object. Tell the groups to write their lists on flip charts (4 or 5 flip charts will be needed) Compare the lists. Which group was the most creative? Briefly discuss these techniques of creative thinking:

- Magnify : imagine the object to be much larger, gigantic
- Diminish : imagine the object to be much smaller
- Rotate : imagine the object in positions it is not customarily in, see the object from new angles and perspectives
- Move : imagine the object in motion.

This time the groups will deal with a real problem—how to maximise the number of vasectomies in your area during the next month. First, participants should work alone for 5 minutes, then, work in groups for 10 minutes, and write lists on chalk boards. Compare lists. These lists are probably short. Why? Medical officers are conditioned not to go beyond certain boundaries. For example, are coercive methods listed? Emphasize that we must separate evaluation and creative thinking. We must temporarily suspend judgement until we generate as many ideas as possible. Later, we can judge the value of the ideas, but first we must create ideas.

Summary of Creative Thinking and Innovation Exercises:

1. Go outside the dots; don't assume you have to remain within boundaries and limitations.
2. Magnify, diminish, rotate, and move objects and 'Ideas'
3. Separate creative thinking from evaluation; do not put limitations on creative thinking; evaluation can come later.

2.1.3 Task Analysis

Management Responsibilities of Medical Officers at primary health centres.

Responsibilities and required managerial capabilities of medical officer, primary health centre are given below. The tasks are taken from Handout 2.2.2, retaining the serial number therein.

General

- (1) He should, therefore, keep himself fully conversant with the area, villages, topography, demography, health needs and public health problems.

- Activities:
1. Obtain required information through various sources.
 2. Discuss health problems with other informed personnel in the area.
 3. Set up mechanisms to up-date the information.

- Capability:
1. Community Health Diagnosis.
 2. Health Planning.

For this purpose, the medical officers of a PHC will divide the area amongst themselves on a geographical basis and will be responsible for all the health programmes in their respective areas.

Activities: 1. Divide the area among MOs.

Capability: 1. Assess the logistics and supervision requirements.
2. Divide the area for smooth operation.

A. Curative Work

- (2) He will make detailed arrangements for the distribution of work in the treatment of emergency cases which comes outside the normal OPD hours.

Activities: 1. Assess the likely emergency need.
2. Prepare plans to handle such cases.
3. Make arrangements so that necessary staff and equipment is available when needed.
4. Review with the staff the quality of care provided in the past and take corrective action as necessary.

Capability: 1. Work analysis.
2. Design of work programme.
3. Assign duties.
4. Evaluate past performance.

- (3) He will organise laboratory services for cases when necessary and within the scope of his laboratory for proper diagnosis of doubtful cases.

Activities: 1. Assess need for laboratory services.
2. Organise work in the laboratory.
3. Ensure that equipment and supplies are available.
4. Monitor the performance of laboratory.

Capability: 1. Work analysis.
2. Design of work programme.
3. Assign duties.
4. Evaluate past performance.
5. Maintenance of equipment.
6. Supplies management.

- (4) He will provide guidance to the health assistants, health workers and health guides in the treatment of minor ailments.

Activities: 1. Periodically assess capabilities of various functionaries in treating minor ailments.
2. Organize in service training activities.

Capability: 1. Plan and organise training and continuing education activities.

- (5) He will cooperate and/or coordinate with other institutions providing health services in the Block.

Activities:

1. Identify various institutions providing health services.
2. Assess gaps between need and position in the health care being provided in his area.
3. Make efforts to fill this gap.

Capability:

1. Community Health Diagnosis
2. Health Planning.
3. Cooperation and coordination with other institutions.

B. Preventive Work

- (1) He will supervise their work regularly, both in the clinic and in the community setting, and will give them necessary guidance and direction.

Activities:

1. Assess weaknesses in performance.
2. Take actions to correct the weaknesses.
3. Identify areas where worker needs extra support.
4. Make arrangements to provide that support.

Capability:

1. Supportive supervision.
2. Problem-solving.

- (2) He will visit each sub-centre in his area at least once in a week on a fixed day not only to check the work of the staff but also to provide curative services and on-the-spot guidance to health assistants, health workers, health guides and trained dais.

Activities:

1. Draw up tour programme.
2. Inform relevant persons
3. Ensure that tour programme is implemented.

Capability:

1. Prepare and undertake effective tour programmes regularly.
2. Problem solving.
3. Review past performance.

- (3) He will visit schools in his area at least once in a year for medical check-up, immunization, and health education. He will also make arrangements for the treatment of those students found with defects.

Activities:

1. Prepare a list of schools.
2. Plan a programme of visits.
3. Implement the programme.

Capability:

1. Programme planning and implementation.

- (4) He will ensure that all the steps are being taken for the control of communicable diseases and proper improvement of sanitation in the villages.

Activities:

1. Prepare a plan of activities on the basis of situational analysis.
2. Implement this plan.

- Capability: 1. Health planning
2. Programme planning and implementation.

(5) He will take necessary action in case of any outbreak of epidemic in his area.

- Activities: 1. Prepare advanced plan in case of emergencies.
2. Implement this plan in case of epidemic.

- Capability: 1. Project planning
2. Resource mobilization and allocation.

C. Promotive Work

(1) He will organise/participate in village health committee/village panchayat meetings to discuss health programmes with the public and enlist their cooperation.

- Activities: 1. Organise the committee
2. Through these committees seek participation of the community.

- Capability: 1. Working with communities
2. Community organisation and participation.

(2) He will keep close liaison with the Block Development Officer and his staff, community leaders and various social welfare agencies in his area and involve them to the best advantage in the promotion of health programmes.

- Activities: 1. Identify activities being performed by personnel of other sectors.
2. Identify areas where help from others is needed.
3. Establish a relationship of cooperation with them.
4. Seek the assistance of these agencies.

- Capability: 1. Establish linkages and intersectoral coordination and cooperation.

(3) He will organise camps, meetings, health education talks and demonstrations, display of posters, exhibitions and films with the assistance of the Block Extension Educator, Health Assistants and Health Workers.

- Capability: 1. Organise health education activities.

D. Training

- Capability: 1. Organise training programmes
2. Conduct training sessions.

E. Administrative

(1) He will supervise the work of staff working under him.

- Capability: 1. Supportive supervision.

(2) He will ensure general cleanliness inside and outside the PHC and also proper maintenance of all the equipments under his charge.

- Capability: 1. Supportive supervision
Maintenance management.

- (3) He will keep up-to-date the inventory and stock register of all the stores and equipment supplied to him and will be responsible for its correct accounting.
- (4) He will prepare indents for drugs, instruments, linen, etc., sufficiently in advance and will submit them to the appropriate health authorities.
- (5) He will ensure the regular supply of medicines to health guides.
Capability: 1. Supplies management.
- (6) He will scrutinise the programme of his staff and suggest changes if necessary to suit the priority of work.
Capability: 1. Programme planning and implementation.
- (7) He will hold monthly staff meetings with his staff for evaluating the progress of work and suggesting steps to be taken for further improvements.
Capability: 1. Making meeting productive for monitoring programme and for providing continuing education.
- (8) He will maintain the prescribed records at PHC level.
- (9) He will receive reports from the periphery, get them compiled and submit the returns regularly to the district health authorities.
Capability: 1. Maintenance of records and preparation of reports and use of relevant data as a part of management information system.
- (10) He will discharge all the financial duties entrusted to him.
Capability: 1. Financial management.
- (11) He will discharge the day-to-day administrative functions pertaining to the PHC.
Capability: 1. Office management
2. Personnel management

2.1.4.: Technical vs Managerial Tasks

A medical officer at PHC is both a technical person and a manager. Each participant must be able to differentiate between these two roles. As a technical worker the medical officer is doing some of the following:

1. Diagnosis and treatment
2. Prescribing
3. Follow-up treatment
4. Any other form of treatment
5. Preventive and promotive services
6. Giving clinical knowledge to his staff

As a manager, the medical officer is doing some of the following:

1. Planning, organising and evaluating the activities of the PHC.
2. Supervising the staff.

3. Maintaining adequate supplies and equipment.
4. Supervising information gathering and recording.
5. Managing the PHC vehicles.
6. Solving problems.
7. Financial administration.
8. Motivating the staff and providing leadership.
9. Developing staff capabilities through training.
10. Developing good relations with community.

One of the problems a medical officer faces in being a PHC manager is a sense of frustration that he is not accomplishing as much in his managerial role as he is accomplishing in his technician's role. A few medical officers get so frustrated with this feeling that they develop a negative attitude towards administrative and managerial functions. Other medical officers tend to ignore management responsibilities and feel comfortable only treating patients. Still other medical officers delegate all administrative responsibilities to their staff and then forget about them. It is important that medical officers realise that they can influence the PHC's performance a great deal through appropriate management and thus provide better health care for a community.

Difference between a medical officer's technical and managerial roles:

1. Doctor can observe the results of treatment in a short period of time; whereas, a manager may have to wait for longer periods of time to see results or improvements.
2. In general, a doctor works alone in his clinical activities, whereas a manager depends upon several other staff and works as a member of a team. For many medical officers it is easier to work alone than to work on a team.
3. The results of performance as a doctor may be more visible and have higher status than the results of performance as a manager.
4. A doctor has a one-to-one relationship with a client and therefore direct control over the client, whereas manager works through his staff and does not have a one-to-one relation with his client.
5. A doctor may have to face motivational problems as often as a manager, both self-motivation and motivation of staff.

Module 2.2 Planning PHC Health Services

PREAMBLE

The Planning function provides the means to the Medical officer to utilise the resources in an orderly and creative manner to achieve the goal—to solve health problems of a community.

It must be emphasised that planning is for the future and the future is full of uncertainties. As realistic an estimate as possible therefore must be made of all factors bearing on the ways of achieving the goal for effective planning. The best of estimates are likely to be wrong in the event, and the plan must have built-in flexibility to be workable under moderately changed conditions.

The creative part of planning lies in devising ways of achieving the goal. There are several ways and all of them must be considered and evaluated in terms of time, resources required and results that will be obtained and the best course of action selected.

Plans must be monitored. The follow-up action consists in taking corrective action to put the plan back on the rails when during monitoring, it is observed that things are not going according to plan.

OBJECTIVES

The medical officer should be able to—

1. Identify major health problems and describe the socio-economic and cultural factors responsible for them.
2. List the types of information needed for planning and how to obtain it.
3. Prepare an Action plan for a health programme.

Duration: 2 hours.

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Categories of major rural health problems and the socio-economic and cultural factors responsible for them.	General Discussion	Chalk, Board
2. Types of information needed to do planning and how to obtain it using health surveys and records.	Lecture discussion	Charts on health survey and records
3. Format, content & uses of action plans	Group Exercise 2.2.1	
4. Gantt Charts	Group Exercise 2.2.2	

TEACHING ACTIVITIES

1. The trainer will obtain from the participants the following and write them on the blackboard: 15 min.
 - a) Major rural health problems.
 - b) Their inter superiorities in terms of immediate action to be taken.
 - c) Factors responsible for the problems and design of action to combat them.

The trainer will conclude the discussion by emphasising one vital point: all planning done by medical officers aims at meeting of health needs and overcoming health problems. Therefore, everyone including the community, ought to be involved in planning. (See Trainer Notes 2.2.1).

2. Lecture on information needed to do planning and how to obtain it: 30 min.
 - Listening to and observing the community.
 - Discussions with community leaders.
 - Talking to health workers (Govt., non-Govt. allopathic and traditional)
 - Talking with development workers, teachers, opinion leaders, religious leaders, etc.
 - Carrying out special surveys and community diagnosis.
3. Begin Exercise 2.2.1 Making an Action Plan. 15 min.
Distribute copies of the exercise 2.2.1. Write a sample Action Plan on the chalkboard. Assign each group a different health programme. Tell the groups to follow the instructions on the worksheet and write out their action plans.
4. Reassemble the class. Introduce the Gantt technique and distribute copies of the worksheet for exercise 2.2.2. 15 min.
5. Begin Exercise 2.2.2. Making a Gantt Chart. 15 min.
Redivide the participants into the same groups. The task is to refer their action plans and arrange the action on the Gantt Chart showing monthly activities during the year. See Trainer Notes 2.2.2.
6. Assemble the class. Draw a large Gantt Chart format on the Chalkboard. 30min.
Consolidate the Gantt Charts prepared by the groups into one Gantt Chart on the chalkboard.
7. Summary and evaluation of learning on module 2.3. Ask one participant to summarize what he/she has learned and how they plan to use it in their work. Comments from other participants and discussion should follow until the trainer is satisfied that the objective of the module have been achieved.

EXERCISE 2.2.1 Worksheet for exercise: Making an Action Plan.

Use this worksheet to develop an action plan for a health programme (immunization, FP, Malaria, Leprosy, TB, School Health, etc.) at your PHC. The action plan should cover a maximum period of 12 months. In the first column, write the action required to carry out the programme. Complex activities should be broken down into simple action. Estimate when each action will begin and end, and write the title of the person responsible for completing the action. Only one person should have primary responsibility for each action, even though several people may be involved.

Name of Health Programme:

Date prepared:

Name of Primary Health Centre:

ACTIONS REQUIRED	DATE		PERSON RESPONSIBLE
	BEGIN	END	

EXERCISE 2.2.2 Worksheet for exercise 2.2.2.: Making a Gantt Chart.

Use the worksheet to make a Gantt Chart for the action plan you completed in Exercise 2.2.1. Arrange all the actions, or groups of actions, on the chart below.

Health Programme..... For the year..... Date prepared.....

HEALTH PROGRAMME
ACTIVITIES

APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR

TRAINER NOTES

2.2.1 Background Reading for Trainer

Aspects of Planning

Planning is a process of analysing and understanding a system, formulating its goals and objectives, assessing its capabilities, designing alternative courses of action or plans for the purpose of achieving these goals and objectives, evaluating the effectiveness of these plans, choosing the preferred plan, initiating the necessary action for its implementation, and monitoring the system to ensure the implementation of the plan and its desired effect on the system. This definition of planning is very comprehensive because it lists the steps of planning.

Planning is one of the major functions of management. In the planning stage, decisions are made about what needs to be done, how and when it has to be done by whom and with what resources. In

considering these points, managers are clarifying objectives or goals and establishing policies and procedures for guiding those who will do the work. They also have chalk out the lines of action, with proper time schedules for the execution of work. This is all part of planning.

For any work planning is essential. 'Well begun is half-done'. This proverb means that a job which is carefully planned is half way to being successfully completed before the actual work commences. In other words, planning saves time in the long run because we know where we are going and how we are going to get there. Planning leads to more effective and faster achievements because everyone involved is clear about what is to be done, how, when and why. Planning ensures unity of purpose, clear cut methods of doing things, and focus on the objectives and targets to be achieved. In short, planning is like laying the foundation for a building. Once the foundation is laid, the upper structure of the building must necessarily conform to the basic design as outlined in the foundation. The preparation or ground work, which we call planning, minimises the cost of doing a job and helps to ensure that resources are used wisely to achieve our objectives.

Characteristics of Good Planning

1. **Focus on purpose:** Foremost in the planning process is the need of setting goals to be reached and objectives to be achieved. These goals and objectives are the purpose of a programme. Every programme has a purpose. Health programmes have different purposes or objectives, like control of communicable diseases, or improvement of sanitation, or provision of MCH care. These programmes have their objectives, both qualitative and quantitative. When we say 'reduction of mortality' it is a qualitative objective. When we specify that mortality should be reduced from X to Y, we have quantified the objective. In an immunization programme, when we say that we want to 'immunise children', that is only a goal or a qualitative objective. When we specify the coverage as a percentage of the children that have to be immunised, we now have a quantitative objective. Planning takes into consideration both qualitative and quantitative objective, and formulates goals that indicate the direction in which a particular programme is to move. So the most important thing about planning is to have clear cut objectives and goals or purpose.
2. **Continuity and flexibility:** Like learning, planning is also a continuous process. When objectives have been set, a plan is not a final form. Situations change, people change and technology changes. It may be necessary, therefore, to adjust the plan to changes. The plan must be flexible and the planning process must provide for adjustments. This is particularly necessary in long term plans that cover a period of years. But all plans must be flexible and the updating of plans must go on continuously.
3. **Harmony with organisation and environment:** In good planning there must have been complete identification with the organisation and with the environment. In other words, the plan should not be based on high ideals and be blind to the social, economic and political conditions in the environment. Over ambitious plans should be avoided. Plans should always be realistic.
4. **Precisions:** Planning must be precise in its objective, scope and nature. It should be realistic in scope and pinpoint the expected results.
5. **Pervasiveness:** It should be pervasive activity covering the entire enterprise or organisation will all its departments, sectors and different levels of management and functioning. Planning is not the exclusive responsibility of top management only. It extends also middle and lower managers. In

lower levels individuals must know individual work assignment in keeping with the overall objectives.

6. Documentation: Planning should always be documented so that all concerned are fully committed to the implementation of the programme. The document will also serve as a blueprint for implementation.

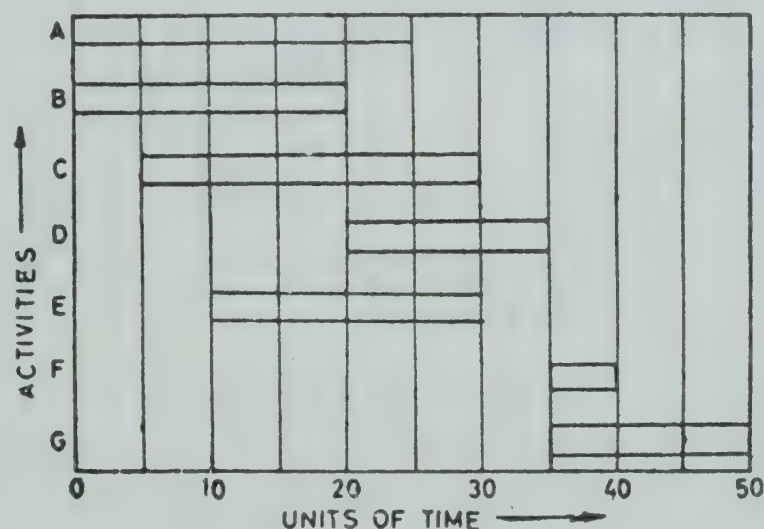
Steps in Planning Process

1. Analysis and understanding of the system: The medical officer needs to understand the system he is working in, consisting of health workers, community and higher authorities. The types of needs of each one in the system have to be spelled out.
2. Formulation of operational goals and objectives: Objectives are short statements of what must be done. The objectives may be broad or specific. The more precisely they are set the earlier it will be to work towards them.
3. Assessment of current organisation capabilities: Once the objectives are clear, there is need to assess the resources available to reach the goals. The staff strength, and their capabilities have to be taken into account. Any gaps noticed have to be rectified before implementing the plan.
4. Designing alternative courses of action: Alternative courses have to be thought of. They may have varying potentialities.
5. Evaluating the effectiveness of alternative plans and choice of action: These different courses of action have to be evaluated in terms of effectiveness and efficiency. The course of action which can lead to the attainment of objectives within the constraints of time and resources have to be weighed and chosen.
6. Implementation: After you have a work plan, the plan can be implemented. The work plan is only a guide to action. Although you have a work plan, you should be flexible enough to adjust to changed conditions and to unusual or unexpected situations. Implementation is the key step in the planning process. Give special attention to it.
7. Control or monitoring: When a plan is set in motion, the medical officer should know what is happening and how the plan is proceeding. For this purpose, one should have regular feedback both by way of written records and reports and by direct observation.
8. Evaluation: The plan has to be evaluated. Evaluation is measuring what has been done against what had been planned to do. Any deviations have to be explained and necessary action has to be initiated to correct deviations.
9. Reanalysis and new understanding of the system: One can take an overview of the plan of work and see what has been achieved. The whole system has to be understood a new and then the planning process begins the second cycle, again proceeding through the main steps.

2.2.2 Gantt Charts

A pictorial chart, also known as the 'Bar Chart', was for the first time developed by Henry Gantt around 1900 and is used to deal with complex activities. The bar chart consists of two coordinates, the horizontal represents the time elapsed and the vertical represents the job or activities performed. The jobs or activities are shown in the form of bars as shown in Figure below:

The length of the bar shows the time the job or the activity takes for completion. Mostly in every project some jobs are taken up concurrently and some are to be completed before others can begin. Hence in a bar chart, some of the bars run parallel or overlap each other time-wise and some run serially with one bar beginning after another bar ends.



In figure above for example, activities A and B can start at the same time and proceed concurrently or in parallel, though they take different time intervals for their completion. Activity C begins 5 days after the start of activity A and B. Activity D cannot be started until activity B is over. The bars representing B and D therefore run serially.

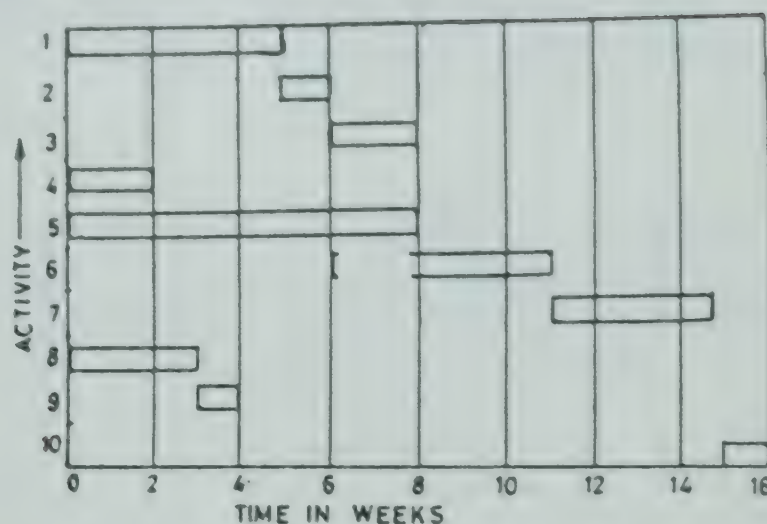
Let us consider a few examples of Bar charts:

Example 1: An equipment consists of three parts A, B and C. These are assembled together after manufacture. Part A is of cast iron, which requires a pattern and a mould. Part B is to be machined on a special machine and hence special machine is to be purchased and erected. Part C needs special heat treatment before assembly. The assembly has to be tested with a specially fabricated rig before dispatch. The time needed by each activity is given below. Draw the bar chart.

1.	Preparing pattern for casting Part A	5 Weeks
2.	Preparing mould for Part A	1 Week
3.	Casting and cleaning of A	2 Week
4.	Heat treatment of C	2 Weeks
5.	Obtaining and installing machine M	8 Weeks
6.	Machine Part B	3 Weeks
7.	Assembly Parts A, B and C	4 Weeks
8.	Preparing a test rig	3 Weeks
9.	Testing Assembly	1 Week
10.	Packing and dispatch	1 Week
		<hr/>
		30 Weeks
		<hr/>

Solution

The bar chart for this example is given as below:



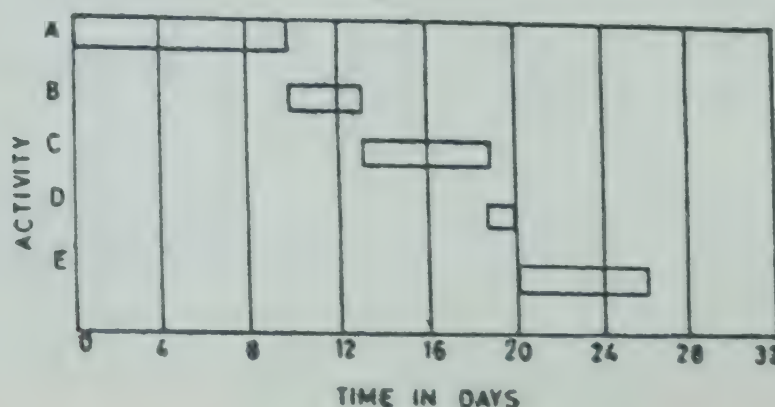
From the study of the various activities, it is found that activity 1, 4, 5 and 8 can be started concurrently i.e., at the same time. These have been indicated in the bar chart. Activity 2 begins after the completion of activity 1. Similarly activity 3 begins after the completion of activity 2. Bar chart shows that activity 6 can begin when the activity 5 is over and activity 7 can begin when activity 6 is over. Similarly activity 9 can begin when activity 8 is over and activity 10 can begin when activity 7 is over. From the bar chart it is found project completion time is 16 weeks, although total time required by all the activities is 30 weeks. In this way bar chart gives information, when and where the various activities should be started and end so that project completion time be minimum.

Example 2: Draw the bar (Gantt) chart for the following examination work:

A.	Design questionnaire	10 days
B.	Print question paper	3 days
C.	Distribute to various centres	6 days
D.	Answer questionnaire	1 day
E.	Collect answer books at main office	6 days
		<hr/>
		26 days
		<hr/>

Solution

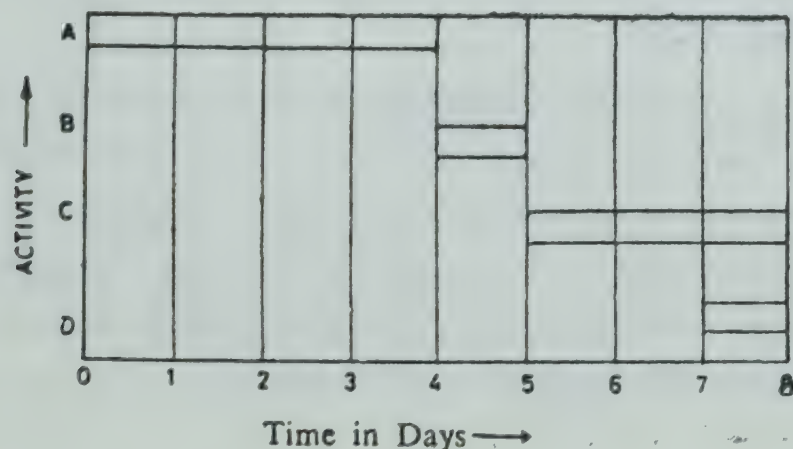
All the above activities are interdependent and in the order of sequence. The total duration is 26 days. The Gantt Chart can be drawn as shown in figure below.



Example 3. Draw the bar chart for the following drawing and printing work:

- | | | |
|----|------------------------|--------|
| A. | Make drawing by pencil | 4 days |
| B. | Do inking on drawing | 1 day |
| C. | Make prints | 3 days |
| D. | Cut and fold | 1 day |

9 days



Solution

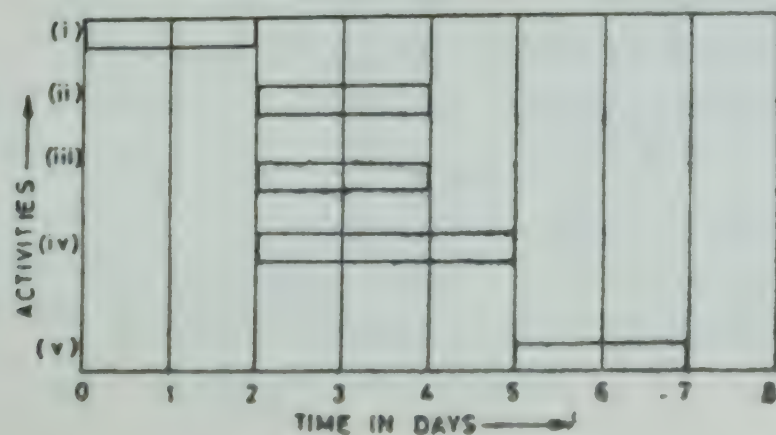
Here in this problem, activity A, B, and C are interdependent. It means activity B will begin where activity A is over and activity C will begin when activity B is over. Activity D consumes 1 day and this can be started simultaneously with activity C, on the 7th day and thus project completion time will be 8 days. Thus one day can be saved in this way.

Example 4: Draw the bar chart for making a chair. The details of activities are as under:

- | | | |
|-------|------------------------------------|--------|
| (i) | Make dimensional sketches of parts | 2 days |
| (ii) | Make legs | 2 days |
| (iii) | Make seat | 3 days |
| (iv) | Make back | 3 days |
| (v) | Assemble parts | 2 days |

Solution

In this problem after activity (i) is over, activities (ii), (iii) and (iv) can be started at the same time, i.e. concurrent activities. These activities are independent one. Therefore, project completion time will be $2+3+2 = 7$ days. Bar charts will be as shown in Figure below.



PREAMBLE

Implementation and coordination form the 'executive' or 'doing' part of a Medical Officer's responsibilities. Implementation is putting into action plans and programmes previously devised. The managerial function of coordination refers to orchestrating the efforts and contributions of various members of the Health team towards achieving results. An important step in coordination is to make every member of group aware of what his contribution is to be as well as what others in the group will be contributing to the overall results.

In a socio-economic programme like health, the coordination function of the Medical officer of a PHC extends far beyond his own PHC group to other governmental and voluntary agencies in the area. This is what is called inter sectoral coordination which is considered essential by W.H.O. for the success of primary health care. Again, it requires ability on the part of the Medical officer to appreciate what potential these various agencies have to contribute to health goals, and overall their several contributions to the attainment of overall results.

OBJECTIVES

The medical officer should be able to:

1. Describe the manager's role in implementation.
2. Define intersectoral coordination and describe its importance in health development.
3. List the organisations and individuals involved in health at the PHC level and explain how to coordinate their efforts.
4. Demonstrate how to solve problems using a structured problem-solving technique.

Duration: 1 hour (classroom)

<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1. Definition of implementation, coordination, intersectoral coordination problem-solving, and the manager's role in these activities	Lecture discussion	
2. Organisations and individuals involved in health at PHC level and the MO's role in coordinating their efforts.	Lectures discussion	
3. The steps in the problem-solving process; forms and procedures for structured problem-solving.	Lecture case study Exercise 2.3.1	

TEACHING ACTIVITIES

- | | | |
|----|--|---------|
| 1. | Lecture on definitions of implementation, coordination (especially intersectoral coordination and problem-solving). Link implementation to planning covered in module 2.3. Point that managers have a tendency to spend too much time of planning and re-planning and never get around to implementation. A good manager always focusses on implementation. During implementation, the manager's role is to monitor progress and overcome barriers to progress. This means the manager must be a problem solver. Implementation also involves coordination. The medical officer should know all the organisation and individuals involved in delivering health services in his area. He should try coordinate their efforts so as to avoid gaps in service, duplication, and waste (see Trainer Notes 2.3.1) | 20 min |
| 2. | Begin Exercise 2.3.1 on Problem-solving. Give a brief introduction to problem-solving (see Trainer Notes 2.3.2. Distribute copies of Exercise 2.3.1) This exercise gives participants a case study on which they use a structured problem-solving approach. Tell participants to work alone for 30 minutes on this part of the exercise. | 15 min. |
| 3. | Divide the participants into small groups. Ask the groups to discuss solutions to the neonatal tetanus problem and reach a consensus on the best solution to the problem. | 10 min. |
| 4. | Reassemble the class. Lead a discussion of the exercise on four possible solutions to protect the newborn:

a) Immunize pregnant women against tetanus to protect the new born.
b) Improve facilities for new born at PHC.
c) Prevent neonatal tetanus by improving MCH services and training traditional dais.
d) Train health workers to recognise and treat neonatal tetanus. | 15 min. |

What solutions did the group select? Why? Are the participants satisfied with the decision?

Probably they are not. The exercise is an artificial situation. Not enough information upon which to base a decision is given. Relate this to issue of having enough information to make the decisions at PHC where there is often a lack of information. Throughout the discussion of this exercise, focus on the problem-solving process, not the content. Content is important only in so far as it illustrates the problem-solving process. Compare the problem-solving process used in this exercise with the traditional medical problem-solving approach of presenting complaint, diagnosis and treatment.

EXERCISE 2.3.1 Instructions For Exercise 2.3.1

A manager must solve problems and therefore needs to know how to go about problem-solving in a systematic way. In this exercise, you will use a structured problem-solving process to decide what is to be done about handling neonatal tetanus in your block.

Situation

Neonatal tetanus has caused the death of seven newborns at the district hospital during the past month. Three of these cases were referred from your PHC. The CMO has expressed surprise and concern, because neonatal tetanus has never before been a major problem in the district. For this reason, the PHCs in the district are not equipped to handle the condition; the occasional cases are referred immediately to the district hospital for treatment. Likewise, the training programmes for health workers in the district has not focussed on the diagnosis and prevention of neonatal tetanus.

The CMO is upset for two reasons. First, he is upset because he now suspects that there may be many unreported neonatal cases in his district.

Second, he is upset because health worker training has not focussed on neonatal tetanus and PHCs are not equipped to save newborns with tetanus infection. The CMO feels that he must act quickly to remedy this situation.

- Step 1: Assume the role of the CMO. Work alone and use the worksheet to arrive at the best solution to this problem. But before you arrive at your final solution, consider as many alternative solutions as you can think of. Take forty-five minutes for this part of the exercise.
- Step 2: Meet your group and compare your solution to the problems of neonatal tetanus with those of other members of the group.

EXERCISE 2.3.1 Worksheet for Exercise on Problem-solving

Instruction: you do systematic problem-solving in your clinical work every day. You should also use a systematic approach to solving management problems. This worksheet is a guide for systematic problem-solving. In parentheses, you will see clinical terms to help you relate clinical problem-solving to management problem-solving.

PROBLEM (PRESENTING COMPLAINT)

CAUSES OF THE PROBLEM (DIAGNOSIS)

FACTS ABOUT THE PROBLEM (RESULTS OF PHYSICAL EXAMINATION)

doing different jobs in the OPD clinic are working for the common goal of delivering health care to those who come to the clinic. Staff activities need to be coordinated so that the work goes on smoothly and patients receive proper treatment. The doctor is the person responsible for coordinating the activities of the staff in the OPD.

The coordination of the PHC with outside agencies is also very important. The medical officer must appreciate that if he coordinates with other departments he will be able to get better support for the health programme. Since health is only one aspect of human development, there is a great need for coordinating with other developmental activities; for example good nutrition means coordinating with the agricultural department. At the block level the BDO is responsible for all the development, employment, food production, water supply, sanitation, industry, education, etc. Therefore, the medical officer has to seek the help of the BDO in promoting the health programme. Likewise, for many other programmes the medical officer must cooperate with other departments, for example, school health services require training the teachers, which means coordinating with the BDO and DEO.

It should be mentioned that medical officers often feel shy about going to another department seeking help. This attitude must change. Medical officer should not feel too proud to seek help, because, as mentioned already, health is only one aspect of overall human development, and every development activity has something to contribute to health.

Apart from government agencies, it is necessary for the medical officer to coordinate with voluntary organisations, private organisations, private practitioners, and others who can contribute to the health programmes. For example, established voluntary organisations which willingly get involved in health programmes are Lions, Rotary, Jaycees, etc. In addition, it is necessary for medical officers and for their staff to initiate and promote village health committee, Mahila Mandals, Youth clubs, etc., which with proper training and motivation can take responsibility for health problems and their solution. In the formation of such committees the BDO again may be of help because under the Social Welfare Department and other programmes like Integrated Rural Development Programme, Integrated child Development Services, etc. funds are available for forming and maintaining such groups.

The World Health Organization considers this type of 'intersectoral coordination' as essential for the success of primary health care.

Intersector Coordination

No sector involved in socio-economic development can function properly in isolation. Activities in one impinge on the goals of another; hence the need for constant consultation between the major social and economic sectors to ensure development and to promote health as part of it. Primary health care, too, requires the support of other sectors. These sectors can also serve as entry points for the development and implementation of primary health care.

The agricultural sector is particularly important in most countries. It can ensure that production of food for family consumption becomes an integral part of agricultural policy and that food actually reaches those who produce it, which in some countries may require changes in the pattern of land tenure. Also nutritional status can be improved through programmes in agriculture and home economics geared to meeting priority family and community needs.

It is particularly important to ensure that women enjoy the benefits of agricultural development as well as men. In most developing countries the majority of women in rural areas are engaged simultaneously in agriculture, household management and the care of infants and children. They need appropriate technology to lighten their workload and increase their work productivity. They also require knowledge about nutrition which they can apply with the resources available, in particular concerning the proper feeding of children and their own nutrition during pregnancy and lactation.

Similar policies in support of health are needed in other sectors. Water for household use is as important as water for cattle, irrigation, energy and industry. Plentiful supplies of clean water help to decrease mortality and morbidity, in particular among infants and children, as well as making life easier for woman. Countrywide plans are required to bring urban and rural water supplies within easy reach of the majority in the shortest possible time. Associations of parents and teachers can assume certain responsibilities for primary health care activities within schools and the community such as sanitation programme, food-for health campaigns or courses on nutrition and first aid.

The mass media can play a supportive educational role by providing valid information on health and ways of attaining it and by depicting the benefits to be derived from improved health practices within primary health care. For example, they could support a sound pharmaceutical policy by helping to create public awareness that a number of drugs with generic names are just as good as advertised products with brand names. They could also help to popularize primary health care by disseminating authentic news about it in different communities.

Many agricultural and industrial activities can have side effects detrimental to health. To mention a few, irrigation schemes can create the right conditions for the breeding of mosquitoes that transmit malaria; artificial lakes can lead to the proliferation of the snails that carry schistosomiasis; industrialization can lead to the pollution of air and water with toxic chemicals and the accompanying urbanization can give rise to psycho-social problems. It is, therefore, wise to incorporate preventive measures in industrial and agricultural projects which pose particular health hazards. Such measures can be included in irrigation schemes and man-made lakes, safety precautions can be taken to reduce industrial accidents and pollution, potential carriers of disease can be identified wherever there are large population movements, and special attention can be given to protecting the physical and mental health of migrant workers. A proper place for primary health care can be found in most of these activities.

In addition, the industrial sector can support primary health care by establishing industries related to health, in particular for essential foods and drugs. Local small-scale industries are also important, because they create employment and thereby improve the local economic base and earning power. This is in keeping with the target adopted by Habitat, the United Nations Conference on Human Settlements, of having safe water for all by the year 1990. The safe disposal of water and excreta also has a significant influence on health.

The health sector can promote investments in water supply and sanitation, but as a rule major investments should come from other sectors. In rural areas in particular, the community may well be active in these fields as part of primary health care. Education in the proper use and maintenance of water and sanitary facilities is important.

Housing that is properly adapted to local climatic and environmental conditions has a positive effect

on health. Houses, like animal shelters and food storage facilities, need to be proof not only against the elements but also against insects and rodents that carry disease. All these structures, and particularly kitchens and sanitary facilities, should be easy to clean. Here too, education is important for ensuring the proper maintenance of houses and the areas surrounding them.

Certain aspects of public works and communications are of strategic importance to primary health care, particularly for dispersed populations. Feeder roads not only connect the farmer to the market but also make it easier for people to reach villages, bringing new ideas together with the supplies needed for health and other sectors. Two-way radio communication, where this can be afforded, puts isolated areas in contact with more centrally located administrative levels, at the same time serving as a vehicle for learning. Low-cost pedal operated radio communication has been successfully used in primary health care in a number of developing countries.

The educational sector also has an important part to play in the development and operation of primary health care. Community education helps people to understand their health problems, possible solutions to them and the cost of different alternatives. Instructive literature can be developed and distributed through the educational system.

Coordinated planning at the community level will make it possible to link primary health care closely with other sectors in joint efforts for community development. Thus, community workers can be trained to provide services of different kinds and to complement one another's roles. For example, the health worker can advise on the importance of improved food storage at home and on the farm and can give practical guidance on this matter. Similarly, the agricultural worker who understands the basic principles of good nutrition can influence the production of appropriate foods and their consumption by families, helped by a local agricultural policy that favours food crops rather than cash crops.

2.3.2 Problem-Solving

Steps in problem-solving:

Step 1: Identifying the problem

Step 2: Identifying possible solutions

Step 3: Assessing the advantages and disadvantages of each solution

Step 4: Selecting one solution

Step 5: Carrying out and follow up the solution to the problem.

Blocks to problem-solving effectiveness

There are eight blocks to problem-solving effectiveness to which team members should be alerted.

1. Lack of clarity in stating the problem: Much of the initial effort of teams in solving a problem is directed towards orienting members to what the problem is. This phase is extremely important, and it deserves sufficient time and effort to identify the problem, to define it, and through this process, to get the members involved in and committed to solving it. Often teams are doomed to failure when they inadequately define the nature of their problem.
2. Insufficient information: When information is minimal, the definition of the problem will be

inadequate, fewer alternative strategies for the solution will be generated, and the potential consequences of these alternatives will not be properly explored. The result is relatively poor solution. Great emphasis must be placed on fact finding in order to solve a problem effectively.

3. Poor communication within the team: Poor communication among team members has the same negative effects as insufficient information, with the added problem that it makes it difficult to implement any action that requires coordination among team members. Effective communication among all team members is necessary for effective problem-solving.
4. Premature judgement of alternative strategies, or premature choice: Most people are too quick to pass judgement on the suggested solutions to problems. As teams engage in problem-solving, they must avoid the tendency to judge each idea as it comes along. Instead, they should create an atmosphere that supports the presentation and favourable consideration of a wide variety of possible solutions. The choice of one solution should come only after all possible solutions have been carefully considered.
5. Practical, competitive atmosphere: A supportive, trusting cooperative atmosphere is necessary for solving problems successfully. If team members have reservations about the way in which other members are evaluating their ideas, effective problem-solving is difficult.
6. Pressures for conformity: Pressure for conformity and compliance slow down the development of diverse alternative solution to problems. Creative divergent thinking is necessary for effective problem-solving.
7. Lack of problem-solving skills: Some teams may need special training in how to use problem-solving methods to advantage training may be provided by an expert member of the team, or the team may call in an expert from outside.
8. Inadequate motivation: Any problem-solving team must be motivated to solve its problems. If the group members are not motivated, they must first be made to see the importance of the problem and the necessity for seeking a solution.

MODULE 2.4	Monitoring Control and Evaluation of PHC Health Services
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PREAMBLE

When plans are under implementation, they need to be monitored regularly and systematically and based on the feedback information that monitoring provides, corrective or 'control' measures have to be taken to ensure that work proceeds again according to plan.

Measurement is an important step in monitoring and control. Measurement is greatly facilitated if at the time of setting objectives, care is taken to specify broadly what you would consider as satisfactory result to be obtained. In general 'satisfactory result' is stipulated in terms of quality, quantity, time and wherever applicable, cost.

It is easy to develop the PHC staff to monitor and control their own work if, at the time of allocation of task to them, they are also told how to measure progress of their own work and when they should report for assistance and help.

OBJECTIVES

The medical officer should be able to:

1. Describe the manager's role in monitoring and evaluation.
2. Explain the use of Action Plans and Gantt Charts in monitoring health programmes.
3. Develop input, output and health status indicators to evaluate a health programme.

Duration: 1 hour

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Definition of monitoring control and evaluation and the manager's role in these activities.	Lecture Discussion	
2. Use of Action Plans and Gantt Charts for monitoring and evaluation.	Lecture Discussion	Chalk Board
3. Input, output and health status indicators for health programmes	Lecture Group Exercise 2.4.1	

TEACHING ACTIVITIES

1. Lecture defining monitoring and evaluation and the medical officer's monitoring and evaluation responsibilities; discuss the use of Action Plans and Gantt Charts in monitoring health programmes. For example, illustrate on the chalk board how an evaluation column can be added to an Action Plan. 30 min.

<i>Action required</i>	<i>Schedule</i>	<i>Person responsible</i>	<i>Evaluation</i>
	<i>Begin</i>	<i>End</i>	

Likewise, a Gantt Chart can be updated periodically based on regular evaluations. The value of a Gantt chart posted in the medical officer's office is that it is a visible evaluation document that reminds him daily of how the implementation of health programmes ought to be progressing. This constant reminder is the essence of monitoring (see Trainer Notes 2.5.1 suggested lecture material on Monitoring and Evaluation).

2. Begin exercise 2.4.1: developing indicators for programme evaluation. Distribute copies of the exercise. Assign one of the major health programmes to each group: Malaria, TB, FP, Leprosy etc. Allow groups 30 minutes to develop a set of indicators for evaluating the programme assigned to them. Caution groups to select the minimum number of indicators needed to effectively evaluate the programme. Also ask them to consider the accessibility of the information, and the feasibility of collecting and maintaining this information at a PHC. (see Trainer Notes 2.4.2)

30 min

EXERCISE 2.4.1: Worksheet for Exercise 2.5.1. Developing Indicators for Programme Evaluation.

The indicators for monitoring and evaluation can be classified into three types: input, output and outcome, i.e. health status indicators. These indicators have been selected out of a large list so that their use becomes manageable and meaningful at your level. In this worksheet, list indicators, most appropriate for monitoring and evaluating the health programme, assigned to you.

Indicators to Measure Inputs

1. Indicators related to manpower resources
 - a.
 - b.
 - c.
 - d.
2. Indicators related to material resources (capital and consumable)
 - a.
 - b.
 - c.
 - d.
3. Indicators related to financial resources
 - a.
 - b.
 - c.
 - d.

Indicators to Measure Output (Activity and Performance)

1. Activity indicators
 - a.
 - b.

- c.
- d.
- 2. Performance indicators
 - a.
 - b.
 - c.
 - d.

Indicators to Measure Outcome i.e. Health Status.

- 1.
- 2.
- 3.
- 4.

TRAINER NOTES

TEACHING ACTIVITY 1 LECTURE MATERIAL

Monitoring and Evaluation

Monitoring and evaluation are two important management functions. Monitoring is done frequently (daily) during the implementation of the plan and is one of the manager's day-to-day responsibilities. It may be done by direct observation, discussions, and reviewing statistics and reports.

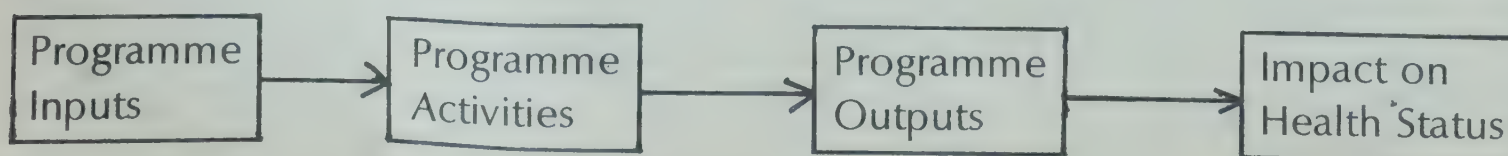
Evaluation is the cumulative result of monitoring over a period of time. Evaluation is an assessment of the quality and quantity of work turned out by an individual or an organisation. Monitoring and evaluation are closely linked to constitute a manager's control function.

Difference Between Monitoring and Evaluation

The process of monitoring consists of collecting and analysing information of actual operations so that deviations from the plan are detected. Evaluation is also used to assess the accomplishment of objectives as outlined in a plan. But the difference between monitoring and evaluation can be seen in their respective scope. While monitoring is confined to oversee on-going operations, evaluation is mostly concerned with the final outcome and with factors associated with it.

How to Carry out Monitoring and Evaluation?

The health and family welfare programme aims to improve the health status of the population. Improved health status is the impact which is sought to be brought about through various programme activities. Inputs are required to carry out programme activities which result in outputs. These outputs create the impact on the health status of the population. This process is shown in the diagram below:



At the PHC level, programme outputs are given as targets. The medical officer can prepare a list of

(b)	CATEGORY OF STAFF	NO.OF TRAINING PROGRAMMES ORGANISED PER YEAR	NO. OF TRAINEES PER YEAR	% OF TIME SPENT IN TRAINING IN THE PROGRAMME
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The (a) and (b) above will provide following indicators:

- i. Ratio of staff in position to total sanctioned (category-wise).
- ii. Average full time equivalent available in a month in the programme (category-wise).
- iii. Average number of training programmes organised per year (category-wise).
- iv. Average number of trainees trained per year (category-wise).
- v. Percentage of time spent in the training programme.
2. Indicators on material resources in the programme:
 - A. i. Ratio of capital items in working conditions.
 - ii. Percentage of time/average number of months or vehicle in working order during a year.
 - B. Consumable items (for items viz., medicines, drugs, dressings, vitamins, CCs, etc. utilised for the programme).
 - i. Proportion in stock to total constumption (major items consumed) in a year.
 - ii. Quantities of medicines/drugs not utilised against supplies in a year (for each type separately).
3. Indicators relating to financial resources.
 - i. Total budget of the PHC per year.
 - ii. Budget for the programme as a percentage of total budget.
 - iii. Total expenditure of the PHC in a year.
 - iv. Percentage of total expenditure in a year on the programme.
 - v. Percentage of contingency expenditure spent on the programme in a year.

Indicators to Measure Outputs (Activity and Performance)

1. Medical Care
 - i. Total number of patients seen in a month or year.
 - ii. Number of new patients seen/100,000 population.
 - iii. Number of old patients seen/100 new patients.

2. Maternal and Child Health

- i. Average number of pregnant mothers registered per ANM per year.
- ii. Number of pregnant mothers registered for ANC/100 expected pregnancies.
- iii. Number of pregnant mothers given TT/100 registered mothers.
- iv. Number of complicated pregnancies detected/100 registered mothers.
- v. Number of registered mothers provided with nutritional supplements/100 registered mothers.
- vi. Average number of deliveries supervised or conducted per ANM in a year.
- vii. Number of deliveries conducted by trained dais or ANMs/100 deliveries reported.
- viii. Number of deliveries reported/100 expected deliveries.
- ix. Number of mothers provided ANC/100 deliveries reported.
- x. Number of deliveries reported complications/100 deliveries conducted by ANM and trained dais.
- xi. Number of children (0-6 years) registered.
- xii. Number of children receiving 1-10 dose of vitamin A solution/100 registered children.
- xiii. Number of children (0-6 years) receiving complete immunization of each type (BCG, DPT, Measles, Polio separately)/100 registered infants and children.
- xiv. Number of children (0-6 years) detected malnourished/100 registered children.
- xv. Percentage of targets achieved for each type of immunization to children.

3. Family Planning

- i. Average number of eligible couples visited per worker per month or year.
- ii. Number of eligible couples using contraceptives type/100 eligible couples.
- iii. Number of oral pill cycles distributed.
- iv. Number of eligible couples with more than two children and accepted terminal method/1000 eligible couples with more than two children.
- v. Percentage of achievement of the targets by each method.
- vi. Number of MTP cases followed by sterilization or IUD/100 MTP cases.
- vii. Number of OTCs held in the area.

4. Malaria

- i. Number of houses visited per health worker in a month.
- ii. Number of fever cases detected/1000 population.
- iii. Number of blood slides taken/1000 population.
- iv. Number of positive slides/1000 fever cases detected.
- v. Number of cases given medical treatment/100 positive cases.
- vi. Percentage of targets achieved.

5. Tuberculosis

- i. Number of cases detected/1000 population.

- ii. Number of new cases detected/100 estimated cases of TB.
 - iii. Number of sputum smears taken/100 new cases detected.
 - iv. Number of cases treatment provided/100 positive cases.
 - v. Number of dropouts for follow up cases/100 old cases.
6. Leprosy
- i. Number of cases/1000 population.
 - ii. Number of new cases detected/1000 population.
 - iii. Number of smears collected/100 new cases detected.
 - iv. Number of positive smears cases/1000 new cases detected.
 - v. Number of new positive cases where treatment was provided/1000 positive cases.
 - vi. Number of cases where treatment was continued/total number of cases.
7. Environmental Sanitation
- i. Number of latrines available/1000 households.
 - ii. Number of households with access to safe drinking water supply/1000 households.
 - iii. Number of wells chlorinated regularly/total number of wells.
 - iv. Number of cases of cholera and gastro enteritis reported/1000 population.

Indicators to Measure Outcome (Health Status)

- i. Infant mortality rate.
- ii. Percentage of new born with weight less than 2500 grams.
- iii. Percentage of malnourished children (0-5 years).
- iv. Maternal mortality rate.
- v. Proportionate mortality under five years of age.
- vi. Crude death rate.
- vii. Percentage of deliveries with complications of the estimated number of deliveries.
- viii. Crude birth rate.
- ix. Disease specific morbidity and mortality, prevalence, incidence, case fatality.
- x. Percentage of still births to total live births reported.

In order to monitor the health and family welfare services provided at primary health centre level, with the help of the indicators identified above, the medical officer needs information on various inputs and outputs of services on routine basis. For this purpose management information and evaluation system for the health and family welfare programmes has been developed at PHC level. This includes twelve different types of records and registers to be maintained at sub-centre and PHC level and also reports to be submitted by health workers every month to PHC which are then compiled and sent to district health officer every month. The details of these registers, records and reports are presented below:

Records/Registers

1. Family and village record.

2. Eligible couple and child register.
3. Sterilization and IUD Register card.
4. MCH card register.
5. Child card register.
6. Report of blood smears for malaria.
7. Birth and death register.
8. Sub-centre clinic register.
9. Stock/Issue register.
10. Diary.

Reports

1. Monthly report for health workers.
2. Health supervisor compilation report.
3. PHC report (monthly).

MODULE 2.5 Supervision

PREAMBLE

Effective supervision is the key to the success of a medical officer in a PHC. However, competent he may be individually, he will not be effective in implementing health programmes in the field unless he can make his health staff work successfully as a team in the field by guiding them and helping them in their work.

The ability to understand his staff as persons and to engage them in productive work to further health programmes in the field is what distinguishes a medical officer as a successful supervisor.

Every medical officer in a PHC must possess a clear understanding of the knowledge, skills and attitudes that go to make an effective supervisor.

OBJECTIVES

The medical officer should be able to:

1. Define supervision and describe the skills, methods, objectives and principles of supervision.
2. Analyse and strengthen a PHC supervisory system.
3. Develop and use a supervisory checklist.

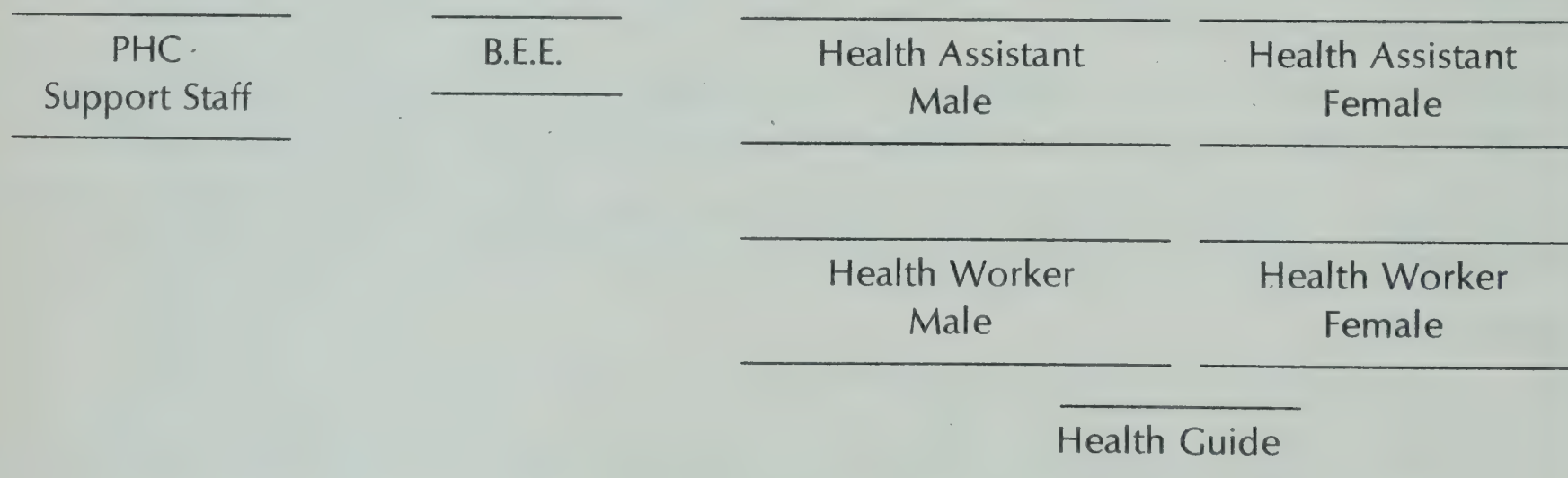
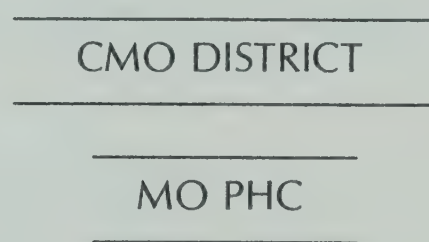
Duration: 1 hour

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Concept and importance of supervision skills needed by supervisors, supervisory methods, objectives and principles of supervision.	Lecture discussion	

2.	Analysis of supervisory system, components of supervisory system	Group Exercise 2.5.1	Chalk Board
3.	Format and use of a supervisory checklist	Group Exercise 2.5.2	Handout 2.6

Teaching Activities

1. Lecture on supervision, its importance, skills needed by supervisor, supervisory methods objectives and principles of supervision (Trainer Notes 2.5.1) 20 min.
2. Begin exercise 2.5.1: strengthening a PHC supervisory system. Distribute copies of the exercise sheet. Ask participants to work alone and draw a diagram of the supervisory structure. Allow 5 minutes for this part of the exercise. Then lead a discussion of the supervisory system. Ask one participant to write his/her diagram on the chalkboard. A typical diagram is shown below: 20 min.



Continue the discussion until the diagram is complete and consensus is reached on the organisation of the supervisory system. Do not discuss supervisory problems at this time.

3. Ask participants to complete work at home alone and fill out the rest of the exercise sheet. First, they should list the type of health personnel (based on their diagram) and then write the required information.
4. Give each participant a copy of the handouts 2.5.2 and 2.5.3 in advance. Now tell the class to arrive at a list of supervisory problems and suggested solution. Write the following format on the chalk board to guide the class. 20 min.

TRAINER NOTES

2.5.1 Supervision

Supervision is a teaching learning process. It may be defined 'as an art or a process by which designated individuals or group of individuals oversee the work of others and establish controls to improve the work as well as the worker'.

The concept of supervision is to guide and help the subordinates in their work. Training, guidance, demonstration individual counselling, and checking are the components of supervision.

Overseeing is to be done at all levels of an organisation. There are persons employed at the middle level for the purpose of supervision. At a PHC these supervisors are medical officer and health assistants. It is the responsibility of supervisor to see that work is done in the best possible way by the workers under their supervision. Supervisors are, therefore, to be in constant touch with their subordinate staff.

For effective supervision the supervisors must have certain skills, knowledge and attitudes.

1. Interpersonal skills: Supervisors should have the capability and tact to deal with their subordinate staff in a friendly polite manner, and yet be firm when the occasion demands.
2. Technical knowledge: Supervisors should know the programme activities and procedures thoroughly. They have to demonstrate to their staff how each activity is performed and how performance can be improved. A good supervisor is ordinarily expected to do better than what his subordinates can do.
3. Leadership: As a good leader supervisors should display the following characteristics:
 - Co-existence with subordinates
 - Assumption of responsibility
 - Objectivity (impartial and fair)
 - Capacity to understand the feelings and problems of subordinates
 - Ability to take decisions and handle situations
 - Willingness to make personal sacrifices to assist subordinates.
4. Attitude: Supervisors must have the proper attitude and sense of responsibility. If they are not fully committed to their job and not set an example, their subordinates will not accept the leadership, and will not follow them.

Effective supervision provides direction and guidance. Good supervisors guide subordinates in the work and also help in solving their problems and difficulties.

In order to do good and effective supervision supervisors must be given proper training. They should be able to understand human relations and supervise in a cordial manner rather than in an authoritarian fashion.

Supervision is best done by direct observation. It is difficult to evaluate work from records and reports. Observation is required in almost all the situations so that the performance can be monitored and timely corrections made. In the absence of direct observation subordinates are liable to slacken their effort or evade their duties.

Supervisory Methods

- Individual conferences and group conferences
- Staff meetings.
- Training sessions
- Review of records
- Evaluation sessions
- Direct observation

Supervision is done by surprise as well as by previous appointment. Direct supervision is to observe subordinates concurrently how they are working. Indirect supervision is to go after the subordinate has performed and check in the community what he/she has done. Even reviewing records and reports is also a type of indirect supervision.

Objectives of Supervision

- To meet predetermined work objectives.
- To promote effectiveness of the workers.
- To promote morale and motivation among workers.
- To promote teamwork.
- To bridge the gap between the worker's personal goals and the organisational goals.

Principles of Supervision

1. Do not exert undue pressure for achievement.
2. Supervision should be general and not too close.
3. Give autonomy to workers depending upon personalities and characteristics.
4. Technical competence of supervisor.
5. Provide training to subordinates.
6. Encourage workers in decision-making.
7. Communicate with workers freely.
8. Do not overburden any individual or group.
9. Capacity to influence downwards depends on capacity to influence upwards.
10. Good leadership.
11. Create suitable climate for productive work.
12. Make supervision a teaching-learning process.
13. Good planning and organisation.
14. Cooperation and coordination.
15. Understand the problem and the situation.
16. Focus on continued staff growth and development.
17. Checking and guidance.

Tips for Medical Officers to Become Effective Supervisors

1. Planning Plan your day-set priorities
 Plan the work of your staff.

Planning gives direction to activities of the day.

Plan ways to improve your PHC; be alert to 'the better way'.

2. Organizing

Make sure you know your responsibilities and your authority.

Let each person work for you, knowing what you expect. Organize the activities in your PHC to meet your planned objectives.

Delegate authority to specific people and hold them responsible for their performance.

3. Controlling

Determine what factors indicate good performance and monitor these factors regularly.

Take corrective action when planned programme get out of control.

Let your staff know that you are aware of their successes and failures.

Exercise discipline, let them know the rules and procedures through training. Be consistent in your application of the rules.

4. Leadership

Know your own job and the jobs of the staff working for you.

Develop confidence in your self and the confidence of others in you. Show fairness and honesty.

Set the pace, show enthusiasm and perservance for meeting schedules, budgets, and other objectives.

Demonstrate, through planning, that you know where you are going and are determined to get there as quickly as possible.

Maintain a pleasant attitude and a sense of humour. Get your staff involved in planning and decision-making.

Share responsibility for mistakes. Defend your staff. Establish a reputation for achieving results.

5. Understanding people

Recognize the differences in your staff members. Learn their strong points and work on their weak ones.

Recognize accomplishments publicly, but criticize constructively in private. Show an active interest in your staff. Learn your staff's personal objectives and help them towards achievement.

6. Effective Communication

Keep your supervisor informed. Communicate with medical officers in other PHCs. Learn to coordinate activities to achieve results.

Let your staff know what is going on.

Let individuals know developments or changes that will affect them.

Make yourself available for private discussions with your staff. Keep those discussions confidential.

Be a good listener; recognize the symptoms of problems and make corrections promptly.

Welcome suggestions for improvement.

7. Handle complaints skilfully
 - Be receptive to staff complaints and handle them in a positive way.
 - Also determine if the complaint is a symptom of a general condition.
 - Follow up to make certain that complaint is resolved.
 - Develop an awareness toward working conditions anticipate complaints and take preventive action.
8. Staff Development
 - Develop staff to their fullest potential.
 - Provide challenge when possible.
 - Use delegation as a training method.
 - Surround yourself with capable people and help them grow. This will help your own career advancement.
 - Recognize that most staff want the opportunity to improve themselves. 'Show the way' by example maintain your own level of competence.
 - Never stand in the way of staff members' progress for selfish reasons.

2.5.2 Supervisory Checklists

Technical supervision is best handled with checklists designed according to the health care services being offered and with the clinical, maternal and child health, community health, and administrative functions of health personnel. A checklist helps ensure a systematic approach to supervision by reminding supervisors of the activities they need to monitor.

Discuss the sample format for a checklist presented in the handouts. Point out that no checklist format is good for all situations. Checklists are tools. Each supervisor should develop a checklist format that suits his particular needs. However, every supervisory checklist must contain two essential parts. First, it must contain a list of activities and skills to be supervised. Second, it must contain space for the supervisor to make notes.

Each participant can arrange these two parts in any format, and he can include additional information on his checklist.

Ask participants whether they have ever used checklists. If some have, ask them to describe the checklists. What were they used for? Did the checklists help them in their work? What problems did they experience in using checklists? Use their examples to show how checklists are used in supervisory work.

Point out that checklists with many items or with too many details taking many pages and, therefore, are cumbersome to use. Short checklists with only a few general items do not give enough guidance, and, therefore are useless. A good checklist is detailed enough to give guidance, but short enough to be used easily.

Ask participants questions about checklists or about using checklists. You must convince participants about the benefits of using checklists. Do not proceed to the exercise until participants are convinced that a checklist can help them do their jobs better.

One very important point: supervisory checklists are not survey forms. Participants will have had experience doing community surveys, where the objective is to collect a large amount of

information. Community survey forms are often 10 pages or more, and are used to describe the social structure of a community and identify leaders, describe health conditions, and identify health problems. Supervisory checklists have a much more limited objective. Checklists focus on the worker being supervised—the knowledge, skills, major activities, plans, performance, etc., of the worker. The checklist is a reminder to the supervisor of areas that should be covered. A useful supervisor checklist is usually not more than 4 to 5 pages (maximum).

MODULE 2.6

Teamwork

PREAMBLE

A medical officer in charge of a PHC can only aim to achieve the goals of delivering primary health care in his area if he can weld the staff at the PHC and the field into a cohesive team. Developing team work is an essential skill to be practised by him.

Teamwork has two essential elements: leadership and cooperation. As a leader, he has to allocate specific tasks work by providing them with the resources and know-how they require. He has also to be able to solve any problems and difficulties they run into.

To elicit co-operation from the members of the team, he has to ensure that:-

- a. Each individual understands the overall team goal.
- b. Each individual understands how he/she can contribute towards achievement of the goal.
- c. Each individual is aware of the potential contributions of other individuals.
- d. Each individual feels the need to recognise the problems of other individuals in order to help them in making their due contribution.

Fostering team work and a team approach to the delivery of health services to the community are key responsibilities of a medical officer.

Objectives

The medical officer should be able to:-

- 1. Describe teamwork and the importance of team work in a PHC.
- 2. Demonstrate the team approach to planning a health activity.

Duration: 1 Hour (Class room)

Contents	Method	Aids
1. Characteristics of a team and the importance of teamwork.	Lecture discussion	
2. Team approach to planning	Role plays Exercise 2.6.1.	Exercise 2.6.1.

TEACHING ACTIVITIES

1. Lecture on teamwork and the importance of teamwork at a PHC (see Trainer Notes on PPs 148-151) 15 min
2. Begin Exercise 2.6.1. 'Planning work as a Team': Distribute Handout on the Exercise and allow participants 10 minutes to read it. Select five participants each to take part in the two role-plays. Give them ten minutes to review their roles and decide how they are going to play them. Then begin the first role-play. Stop the role-play after 10-15 minutes. Then ask the second group to begin the role-play. Stop it after 10-15 minutes. 30 min.
Then lead a discussion on the effect of staff involvement in planning. Compare the two role-plays, especially the attitudes of the two medical officers. Did it take more time to project as a team? Were the results better? Team work results in efficiency in carrying out work and also makes the work more satisfying for the staff.
3. Summary and evaluation of learning in Module 6 will be done by a pre-selected participant. Comments and general discussion should follow until the trainer is satisfied that the objectives of the module have been achieved. 15 min.

EXERCISE 2.6.1

Instructions for exercise: Planning work as a team.

Situation

The medical officer-in-charge of a small, isolated PHC has been selected to take part in a special adult immunisation project. Every adult in three selected villages in his area will be immunised. The PHC will have to close for three days, since the entire staff of this small PHC will be needed to work on the immunisation project.

A message explaining the project has already been sent to the leader of each village. The PHC staff meets to plan how to carry out the project and schedule the work.

Two role-play, exercises will be held for the meeting called by the Medical officer. In the first role play, the medical officer plans the project by himself. In the second role-play, he involves the entire team in planning the project. You may be asked to play a role.

Role Play 1

STEP 1

The trainer will ask five participants to form a group. Each participant will choose a role as medical officer, health assistant(F), health worker(M), health worker(F), village health guide. The other participants in the class will observe the role-play.

STEP 2

Participants taking roles should study the following information:

The medical officer has received instructions on a special adult immunisation project which will involve the entire PHC staff. He has not shared this information with staff member. This medical

officer is in the habit of planning all the work at the PHC. His attitude toward his staff is, 'Do what I say and don't ask questions'. He calls a meeting of the staff and gives these order:

1. The PHC will close for the first three days of October to carry out a special immunisation project in Village A, Village B, and Village C.
2. The health assistant (F) is to coordinate activities in village A.
3. The health worker (F) is to coordinate activities in village B.
4. The health guide is to notify all people in village C and see that they attend the immunisation clinic.
5. Health worker (M) is to transport supplies to all three villages.

The medical officer, in making this announcement, tries to ignore the suggestions and protests of other members of the staff. He wants to end the meeting as quickly as possible and get back to work. The health assistant (F) has been promised vacation leave during the first week of October to attend the marriage of a cousin. She protests loudly. The health worker (F) protests that Village A being her native place, she should not have been asked to coordinate activities in Village B.

The health worker (M) protests that to reach Village C an overnight trip is necessary and he does not want to leave the PHC unguarded in the night while being responsible for the security of the PHC. The health guide also protests that cooperation from village C people will be unlikely because they were treated rudely by the visitors last time they took part in a special project.

STEP 3

The participant taking the medical officer's role calls the meeting. He announces the special proejct. The role-play lasts about fifteen minutes.

Role-Play 2

STEP 1

The trainer will ask a second group of participants to repeat the role-play. Participants who will take part in this second role-play should study the following information:

The medical officer has received instructions on the special adult immunisation project. He decides to consult with the staff how to carry out this project. At this PHC staff members feel free to make suggestions. The medical officer often takes their advice.

This medical officer is in the habit of involving his staff in planning work at the PHC. He respects staff members' opinions and finds that they often make good suggestions. He calls a meeting of the staff to plan the immunisation project. He explains the project and suggests this plan:

1. The health assistant (F) should coordinate activities in Village A, which has no health guide.
2. The health worker (F) should coordinate activities for Village B, which has no health guide.
3. The health worker (M) should be responsible for transporting supplies to all three villages.
4. The health guide should co-ordinate activities for her Village C.

After you suggest this plan, you ask for other suggestions from the staff. The health assistant (F), health worker (F), health worker (M), and village health guide, all use the roles described in Role-Play 1.

STEP 2

The participant playing the medical officer's role conducts the meeting. The staff should agree on a work plan for carrying out the immunisation project. This role-play lasts twenty minutes.

STEP 3

Discuss this role-play exercise in class. Compare the two role-plays and discuss the effect of team involvement in planning work at a PHC.

TRAINER NOTES

2.6.1 Teamwork

Teamwork is an essential part of health programmes. From top to bottom, the staff have to work as a team. Good teamwork is required so that programme activities are carried out at each level. In the delivery of primary health care, there are many teams working at various levels such as, District, PHC, Sub-centre, sub-village levels. Thus, a medical officer needs training in the art of the teamwork.

What is a Team?

A team is a group of two or more people who work together for a common objective. A team works as one unit to achieve a common objective. Each person on the team knows the objectives and has a job to do that helps the team to achieve its objectives. Each team member follows rules and cooperates with other team members. Therefore, in summary we can say that:

- Teams have an objective.
- Teams follow rules.
- Teams organise themselves to achieve their objective.
- Team members cooperate.

What is a Health Team?

A health team is a group of people who work together to promote better health in a community. Health teams follow rules. These rules are government health and family welfare policies. The rules describe the types of health services that the team should provide and the procedures it should follow. Each member of the team knows the job he/she is going to do in cooperation with each other. Health teams have leaders to help coordinate their work. The medical officer is the leader of the PHC team.

Why a Team is used to deliver Health Services?

A team delivers health services because the various health programmes require too much work and too many skills for one person. Working alone, a medical officer can only meet some of the health needs in a community. But by using a team of health personnel, a medical officer can provide more and better health services to many more people.

Characteristics of Effective Teams

1. Appropriate leadership and confidence in its leadership.

2. A clear and shared understanding of its objectives and that achievement of objectives is measurable.
3. High but realistic goals that are achievable.
4. Organisation of the team in a manner consistent with the goals; roles are clearly defined and assigned to team members.
5. Concerned for the welfare and growth of team members.
6. Use of knowledge and skills of all team members.
7. Abilities of the team members to accomplish the objectives.
8. Appropriate decision-making procedures and authority.
9. Use of team problem-solving techniques.
10. Open dealing with conflict.
11. A sense of priorities.
12. Open and honest communication.
13. Willingness of cooperative member to compromise.
14. Keeping to time schedule.
15. Regular evaluation of results.

MODULE 2.7

Leadership and Motivation

PREAMBLE

Two aspects of Leadership are important for a Medical Officer of a PHC. The first is internal to the group: as a leader he has to maintain the cohesion of the group and guide members to a high level of achievement. The second is external to the group in that he has to represent the group as its spokesman to the higher echelons in the organisation to obtain the information and resources that will be necessary to facilitate the work of the group. He has also to be the group's spokesman to the community and other agencies in the field.

There are distinct styles of leadership and a leader should be able to adopt each style appropriately depending upon the worker and the situation. It is wrong to regard one particular style of leadership—especially the participative style—as the best for all seasons. A directive, authoritative one may well be the most effective one when dealing with a worker insecure in his position and in an unstructured situation.

An effective leader is the pride of group: this is one thumb-rule test one can apply in assessing one's own leadership effectiveness.

OBJECTIVES

The medical officer should be able to:

1. Describe the laissez faire, authoritarian and participative styles of leadership.
2. Describe how he/she acts in groups and the appropriate behaviour for a team leader.
3. Identify factors that motivate subordinates to do a good job.

Duration: 1 hour

<i>Contents</i>		<i>Methods</i>	<i>Aids</i>
1.	Laissez faire, authoritarian participative styles of leadership, qualities of a leader; patterns of leadership, authoritarian and participative attitudes.	General discussion	Handout 2.7.1
2.	Behaviour of members and leaders in groups	Exercise 2.7.1	
3.	Motivation	Exercise 2.7.2	

TEACHING ACTIVITIES

1. Participants are given Handout 2.7.1 Leadership the day before the session and asked to come ready for discussion. A leader must adopt his style to suit different staff members and different situations. The style he uses must increase effectiveness. Some staff members work better if MO uses an authoritarian style, some members can be motivated by using a participative style and few competent subordinates may respond best to laissez faire style but a good leader is always interested in effectiveness and not in a particular leadership style. End the discussion by asking participants how they themselves would like to be supervised. (see Trainer Notes 2.7.1). 30 min.
2. Begin Exercise 2.7.1: How you act in groups. Distribute copies of the Exercise form and allow participants 10 minutes to complete the questionnaire. Then lead a discussion of the questions. Ask participants for their opinions on appropriate behaviour for a team leader, for example, in question 1, should the team leader be a good listener? Relate each question to a participative style of leadership. 15 min.
3. Begin Exercise 2.7.2: What motivates you to do good work? Distribute copies of the Exercise Questionnaire and allow participants 10 minutes to complete it. Ask each participant about the five items he has ticked and write the results on the blackboard. (No. 1 will be the item having the largest member of ticks, No. 2 the next largest, and so on.) Lead a discussion of the motivating factors. Point out that what motivates these participants will also motivate the health team members and other staff. 15 min.

EXERCISE 2.7.1: How you act in groups

Questionnaire

Instructions: Read each statement, then mark the place on the scale that describes the way you

normally act in groups. Only you will see this worksheet. Give answers that describe how you act now, not how you would like to act. Keep this worksheet.

1. How would you rate your ability to listen to others in an understanding way?

0	1	2	3	4	5	6	7	8	9	10
	Very bad listener			Average listener					Very good listener	

2. How would you rate your ability to change the ideas or actions of others in group?

0	1	2	3	4	5	6	7	8	9	10
	No influence			Average influence					Very influential	

3. How would you rate your desire to build on the ideas of others?

0	1	2	3	4	5	6	7	8	9	10
	Never, or very seldom			Sometimes					Very often	

4. How would you rate your willingness to trust others?

0	1	2	3	4	5	6	7	8	9	10
	Distrust others			Average					Open and trusting	

5. How would you rate your willingness to be influenced by others?

0	1	2	3	4	5	6	7	8	9	10
	Unwilling			Average					Very willing	

6. How would you rate your desire to run a group?

0	1	2	3	4	5	6	7	8	9	10
	Low I let others			Average					High I take control	

7. How would you rate your awareness of the feeling of others?

0	1	2	3	4	5	6	7	8	9	10
	Unaware or ignore them			Average					Fully aware	

8. How would you rate your reaction to conflict and disputes in the group?

0	1	2	3	4	5	6	7	8	9	10
	Avoid it or ignore it			Average					Welcome it Think argument can be helpful	

9. How would you rate your reaction to different opinions?

0	1	2	3	4	5	6	7	8	9	10
	Become annoyed or ignore them			Average					Welcome the Challenge	

EXERCISE 2.7.2 What Motivates you to do good work?

Questionnaire

Instructions: Mark the five items in the list below which you believe are most important in motivating you to do your best work as a medical officer.

1. Secure employment.
2. Appreciation and recognition of my work at PHC.
3. Good salary.
4. 'Perks' that go with the medical officer's position.
5. Getting on well with my staff.
6. Opportunity for promotion.
7. Opportunity to do challenging work.
8. Pension and other benefits.
9. Being permitted to participate in decisions at district level that affect me.
10. Short working hours.
11. High social status enjoyed by medical officer.
12. Having written job description for my position.
13. Large amount of freedom on the job.
14. Having efficient and competent superiors.
15. Knowing I will be disciplined if I do poor work.
16. Working under close supervision.
17. Active participation of community in health programmes.
18. Good local schools for my children.
19. Challenge of meeting targets given by DMO.

TRAINER NOTES

2.7.1 Leadership

Leadership is Essential. It is the sum total of everything a supervisor does in the work environment. Leadership influences the reactions of the members of the work group. It affects the productivity of the supervisor and the group. For these reasons it is very difficult to separate out any single characteristic that may best describe leadership. A number of factors are involved in the ability to lead, including the following:

- a. Insight into human behaviour.
- b. Decision-making ability on a practical basis.
- c. Ability to plan, organise and direct efforts of others.
- d. Ability to relate to others on a face-to-face basis.

When there is an objective to be attained or whenever a group is faced with an emergency, there is an instinctive search for leadership. It is vital that someone has the responsibility for the group. The leader must also have the authority, in addition to the responsibility, to ensure that the group achieves the desired goal.

Many scholars have written on the subject of leadership. The subject has stimulated the interest of leaders and other individuals throughout history. To aid in learning more about this subject, we will consider three aspects:

- i. Qualities of a leader
- ii. Patterns of leadership
- iii. Styles of leadership

QUALITIES OF A LEADER

Questions are often asked with regard to what one looks for in selecting leaders. And how best can leaders be trained? Most people realize that much is expected of an individual in a leadership role. Many character traits have been studied in an effort to determine the qualities that were common to the largest number of successful leaders.

Research conducted by social scientists shows that (1) leadership is made up of a number of traits and that (2) there is no single type of personality that can be labelled as a leadership-type. The traits that were found among leaders were the same as are found among people in general. The leader, however, often has these traits to a more pronounced degree. But most leaders have the same basic traits as those they lead. This permits them to easily understand the needs and desires of the group. The leader can inspire confidence, gain the group's respect and obtain cooperation in reaching goals. The traits commonly observed in leaders include:

Intelligence
Self-confidence
Formal education
Adaptability

Emotional stability
Enthusiasm
Conceptual ability
Human relations skills

It can be recognised from this list that leadership traits can be learnt.

PATTERNS OF LEADERSHIP

When put into a leadership position, most individuals will adopt one of four possible leadership patterns. These patterns are:

1. Telling: the leader makes a plan, announces decision, and follows through.
2. Selling: the leader makes a plan, but persuades subordinates to assist in implementing the plan.
3. Consulting: the leader asks for help from subordinates in making the plan, tests essential parts of the plan with them, and is responsive to their inputs.
4. Joining: the leader encourages the subordinates to begin making the plan, but joins with them later.

Supervisors such as medical officers tend to do better when using the pattern of leadership that is more natural for them. However, they must realize that their subordinates have different personalities and that the problems and situation that they face, call for a variety of leadership patterns.

Social Scientists suggest that effective supervisors use the leadership pattern that best fits particular problems of a situation. A telling approach is called for in some situation, and will be effective when a less direct approach would not succeed. Most managers recognize that the consulting and joining patterns have many advantages over other methods. However, all four leadership pattern have their respective place.

STYLE OF LEADERSHIP

The supervisors actions and decisions are influenced by his assumptions about human nature. For example, Douglas Mc Gregor's Theory X assumes that:

1. The average person has an inherent dislike for work and will avoid it if he can.

This assumption causes supervisors to emphasize productivity. The implication is that supervisors must somehow overcome the tendency of staff to find ways to keep away from working.

2. 'Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment in order to get them to work:

The implication in this second assumption is that regardless of a supervisor's approach, people will perform their duties only under strictly controlled conditions.

3. 'The average person prefers to be directed, wishes to avoid responsibility, has relatively little ambition and above all wants security.'

The implication in this assumption is that supervisors should be authoritarian in dealing with their staff.

McGregor states that most policies and procedures in organisations are based on Theory X—assumptions about human nature. But with the increase of knowledge and acceptance of the findings of social scientists, it is necessary and appropriate to reassess the earlier assumptions concerning people and their behaviour in organisations.

In recent years management has become more concerned with people in organizations. Management is much more humanitarian. It has, in general, become more generous in its treatment of the employees. This is partly due to the fact that social scientists have acquired a great deal of knowledge about human behaviour, and this new knowledge provided the beginning for a new theory regarding people and how they work. McGregor's Theory Y summarises this new approach by making these assumptions about human nature.

1. The expenditure of physical and mental effort in work is as natural as play or rest'.
People, in general, do not dislike work. For many persons, work is a source of satisfaction.
2. 'External control and the threat of punishment are not the only way to make people work. People will exercise self-direction and self-control to achieve objectives to which they are committed.'
3. 'Commitment to objectives is determined by the rewards associated with their achievement.'

The implication is that the supervisor is faced with challenge of meeting the needs of the individual for doing meaningful work and for resultant good performance.

4. 'The average person learns, under proper conditions, not only to accept but to seek responsibility'.

In many instances people who lack ambition or who try to escape responsibility, are responding to the effects of past experience, rather than exhibiting characteristics of people in general.

5. 'The capacity to solve work related problems is widely, not narrowly, distributed in the population.'
6. 'Under the conditions of modern life, the intellectual capacity of the average person are only partially utilized.'

Mc Gregor has differentiated between Theory X and Y. Theory Y recognizes the fact that people have the capacity to grow and to develop. People are a valuable resource, and supervisors should use the best means to bring out the full potential of their subordinates. The implication in Theory Y is that if workers are uncooperative, indifferent, or uncreative, management has then failed to provide the atmosphere needed for them to be productive.

Summary of Authoritarian and Participative Attitudes

Authoritarian Attitudes (Theory X)

People do not like to work

People work mostly for money.

Participative Attitudes (Theory Y)

People are naturally active. They like to work if they think the work is important.

People look for many things in work: a chance to learn new skills, to make money, to achieve personal goals, and to help others.

People do their work because they are afraid of losing their jobs

Many adults remain child-like. They naturally depend on supervisors the way a child depends on his father

People need direction. They do not want to think for themselves. They need detailed instruction on what to do and how to do it. They are not interested in the overall result of their work.

People need supervisors who will watch them closely, give them praise for good work, and punish them for poor work.

People think only about their own selfish interest.

People do not like to change. They like to do the same work.

People need to be pushed to do their work.

People do their work because they get satisfaction from doing a job well.

People want adult responsibility and feeling of doing something important. They like to control their own work.

People know what is needed and can direct their own work. They need advice and assistance plus feedback on how well they are doing. They want to know how their work contributes to the improvement of health in the community.

People need to be respected by supervisors. Most people are responsible workers and do not need to be watched every moment.

People think about community and national interests, as well as their own personal interests.

People get tired of doing the same work. They like new experiences. People want to learn new skills.

People work best when they are encouraged and helped, not pushed.

2.7.2 Motivation

Whether through persuasion of coercion, participation or command, supervisors attempt to motivate workers. Some management specialists believe that motivation is the most challenging task for supervisors.

Definition: Motivation is anything that causes a person to act, to change behaviour. Motivation may be positive (the carrot) or negative (the stick). Positive motivation succeeds in more cases than negative motivation. Motivation is not manipulation. A motivated person acts willingly and knowingly. There is not trickery. Social scientists tell us immediate feed back is a great motivator.

Supervisors often think of motivating subordinates. Yet they have to motivate themselves, and realise that they (Supervisors) have a motivating or demotivating effect on colleagues and seniors. Everyone is motivated in some situations. So, it is important to consider motivation at the time of selection and recruitment. Motivation is that process which gives behaviour a purpose and direction. In an organisational setting the main elements are goal congruence and effort. Goal congruence occurs when organisational goals are brought into line with goal of individual accomplishment and uniqueness. Having generated the individual commitment and enhanced responsibilities the possibility of causing and sustaining motivation amongst various levels of personnel becomes easier.

Motivation is contagious; one motivated worker may spread motivation throughout a group. Motivation is not constant day after day, a person may be more motivated one time than at other times. Lack of motivation is almost always a symptom. A supervisor should try to diagnose and treat and cause and not attempt to treat the symptom. Motivation is individual. Every person is different and responds to different types of motivation.

Characteristics of a Motivated Person.

Enthusiastic

Confident

Optimistic

Self-directed

Positive attitude

Desire to succeed; works well with people.

Factors that Tend to Motivate

Good working conditions

Status and respect

Good salary

Accountability/Higher or new responsibilities.

Job security

Promotions

Praise and recognition

Job satisfaction

Participation in decisions;
getting on well with other staff.

Ways to Motivate Subordinates

Health personnel have different personalities, different goals, and different work habits. Consequently, what motivates one staff member may not motivate another. As a supervisor, you will have to choose a combination of methods to motivate each of your subordinates. Experience will suggest which methods work best.

1. Set of Good Example

The best way to motivate subordinates is to first motivate yourself. You are a role model for your staff. Maintain a positive attitude. Set high standards for yourself and live up to them. Ask for help when you need it and admit mistakes when you make them. This will encourage your staff to do the same. If a supervisor cannot set a good example by doing a good job, then he cannot expect his staff to do good job.

2. Develop and Maintain Good Personal Relations

You must develop a personal relationship with a subordinate before you can motivate him. To develop good personal relations, you must be friendly and communicate openly. Try to understand the attitude and goals of your staff. Do not criticise subordinates unfairly and never criticise them behind their backs or in front of other members. Maintain a sense of humour. It helps to promote good relations. Avoid getting angry. Anger almost always make matters worse.

3. Place subordinates where they can work best

Success is perhaps the best motivator. After you get to know a subordinate you can assess his

strengths and weaknesses, place him in the job for which he is best suited. Subordinate is more likely to succeed and therefore more likely to be motivated working in a setting that takes advantage of his particular interests and skills.

4. Use a participative style

Encouraging subordinates to participate and get involved will motivate them to do a good job. Subordinates like to know what is going on. Share information with them. Use two-way communication and insist on feedback. When subordinates offer good suggestions accept them. In some situations, and with some subordinates, you may use an authoritarian style. But most often a participative style should be used because it is best for motivating the staff.

5. Guide, Encourage, and Support Subordinates

To motivate your staff you must continually offer guidance, encouragement and support. Guidance means working with subordinate to help them plan and evaluate their own work. Guidance also means, letting subordinates know what you expect of them. People tend to act as others expect them to act. Therefore, it is essential that subordinates know what behaviour you expect from them. All staff members will need guidance in solving work problems. Some may need guidance in solving personal problems. Encouragement means helping and reassuring staff members, regardless of their type of problem. Support means providing subordinates with a satisfactory work environment which includes the supplies and materials they need to do their job.

6. Reward Good Work

A positive way to motivate subordinates is to reward good work with praise. Praise is a powerful motivator. Do not hesitate to express your appreciation for the work your staff is doing. Every one wants to feel his efforts are appreciated. Give praise is especially effective when given in front of PHC staff, because it increases the subordinate's self-confidence.

7. Build Team Spirit

Your staff will be motivated to work harder if they feel they are part of a team. Make sure subordinates understand that they are members of the team and that their jobs are important to the success of the team. Make them feel that work of providing health services is the responsibility of all health personnel in the district. Schedule regular staff meetings to build and maintain team spirit.

8. Provide continuing Education

A continuing education programme will motivate your staff to improve their skills. Most people do not enjoy doing the same job in the same way over and over again. They need variety. Many subordinates will enjoy the challenge of learning new skills or taking on new responsibility. Your continuing education programme should provide the training that subordinates need to improve their existing skill and to learn new skills. When a subordinate can do a new task, delegate that responsibility to him. Continuing education will make your job lot easier and motivate your staff to achieve maximum performance.

Session 2.8.1 Financial Management**PREAMBLE**

A subject which generally remains neglected in the wide field of management of a PHC is Financial Management. A Medical Officer of a PHC needs to know how a budget is formed and its various heads and classifications. Also, he must be aware of simple procedures of cash handling and cash accounting.

An M.O, who is not uncomfortable in dealing with financial matters is well prepared to devote his full attention to other more important managerial functions.

OBJECTIVES

The Medical officer should be able to:

1. Describe the financial procedures, forms and records in use at PHC
2. Explain M.O.'s responsibilities in managing the financial system at a PHC.

Duration: 1 hour

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Financial procedures and forms regarding budgeting, imprest money, travel advance/ daily allowance. Sanctioning powers of M.O. TA/DA advance festival advance etc.	Lecture discussion	Questionnaire Handout 2.8.1.1

TEACHING ACTIVITIES

1. The exercise Questionnaire 2.8.1.1 should be filled up by the participants several days in advance and forwarded to the lecturer, preferably district Accounts Officer, to serve as a basis for his lecture. 45 min.
2. Lecture on financial procedures, forms and records (See Trainer Notes 2.8.1.1) 45 min.
3. Summary and evaluation. Ask one participants to summarise what he/she has learnt in this module and how they plan to use it in their work. Comments from other participants and discussion should follow until the trainer is satisfied that the objectives of the module have been achieved. 15 min.

TRAINER NOTES

2.8.1.1 Financial System

The financial system consists of laws, policies, regulations, procedures, and proforma related to the collection and expenditure of Government money. The financial system is designed to support health personnel as they carry out their programmes. It is also designed to protect Government money from being misused or wasted.

The medical officers at PHCs do not prepare a budget, but they should understand the budgeting procedures and deadlines at district levels so that they can make inputs into the budget through the district health officer. From an accounts officer's point of view, there are two types of money:

1. Invisible money or budgetary allocation
2. Visible money or cash

The government gives primary health centres invisible money, called a budget allocation, for specific purposes; for example, money for drugs, for staff salaries, for the vehicle etc. The actual money does not pass through the PHC, but requisitions are used to spend the budget allocation. For example, there might be a budget allocation of Rs. 5,000 for PHC drugs. When issued to the PHC by medical stores, the value of the drugs is automatically subtracted from the Rs. 5,000 allocation. In this way, the PHC 'spends' Rs. 5,000 for drugs without any money passing through the PHC.

A small cash, commonly known as 'imprest money', does pass through the PHC. Imprest money is provided to meet unforeseen emergencies. Medical officers are authorised to spend imprest money and then replenish the amount spent. But imprest money is only replenished against an original receipt in order to prevent misuse of funds. Each time imprest money is spent, it must be recorded on a cash voucher. Each cash voucher is numbered and must have a receipt attached to it from the person who has sold the goods to the PHC. (If not possible, the voucher is signed by the person in charge of the cash). These cash voucher must be kept carefully, because the accounts officer or the auditors may check them any time.

Answers to Questionnaire on Financial System

Note: This material was compiled by the finance and Accounts Officer, Lucknow, UP. It is included here as an example of the type of material that is needed to teach this module effectively.

Question 1: Sources of Funds

The sources of funds for health services are as under:

1. 213 Cabinet (Non-Plan)
2. 280 Medical—Non-Plan
3. 280 Medical—Plan
4. 281 Family Welfare—Plan
5. 282 Public Health—Non-Plan
6. 282 Public Health—Plan
7. 299 Hills—Non-Plan

8. 299 Hills—Plan
9. 288 Samajik Suraksha and Kalyan (Non-Plan)
10. 289 Relief in Natural Calamities (Non-Plan).

Donations and payments from community can be accepted only on specific sanction of the Government. Such receipts in cash cannot be spent on health services, but rather must be deposited into the treasury under departmental receipts unless there are Government orders to the contrary. As soon as any proposal for donations in cash or kind (land, building, equipment, furniture etc.) is received from the public or community, send a detailed description to the CMO/DMHS for obtaining orders of the State Government. Till such time Government orders are received no such donation should be accepted by the local officer.

Question 2: Budgeting Process at District and State Levels

Annual budget estimates for the coming financial year are prepared in the months of September/October of the current year. Since budget proposals for next year are required to be submitted by the Directorate of Medical, Health and FW on October 25 of current year to the state Government, exercises are started in September at district level.

Every head of an office is required to prepare budget estimates in respects of salaries of establishment, contingent expenditure and various other items viz POL/repairs to vehicles, telephones, office expense rent of building etc. In hospitals requirements in respect of medicines, diet, equipment, hospital contingencies, surgical dressings, clothing etc. also need to be worked out.

Only costs of sanctioned posts and existing budget items are included in budget estimates. For new items, separate proposals with full details are required to be made on a form called schedule of new demands. The estimates should be accompanied by explanatory notes, and every major increase or decrease from current year's allotment must be clearly and precisely explained.

The budget estimates should be accurate, and every officer should give closest possible attention to this work. All likely factors should be taken into consideration while preparing estimates.

Question 3: Budget Allocations

Total health (including medical and family welfare) budget for U.P. is Rs. 225.90 crores during 1984-85.

Allocations in drugs and supplies, salaries and other items for a district depends on various factor, viz (1) Size, area, population, (2) Number of PHCs, dispensaries, sub-centres, (3) Size of district hospital, women's hospital and number and size of other hospitals. Staff is sanctioned from different budgets for different types of normal (non-plan) schemes as well as from Plan schemes. Similarly, additional inputs have been provided from the special project, viz.; from second I.P.P. All these things have to be kept in mind for working out allocations for different items.

Under the circumstances allocation for a district or PHC cannot be worked out in a general way. However, the following norms/rates may be helpful in working out these allocations:

1. Only 40 per cent allotment of medicines is placed at the disposal of the CMOs, and the remaining 60 per cent allotment is centrally purchased by Central Medical Stores Depot of the Medical Directorate, who supply these medicines to the CMOs. Certain CMOs allot above 40

per cent amount to their PHCs, while others make central purchases at district level and supply medicines to the PHCs.

2. Annual allotments are made as follows:

i. Medicines at PHCs	Rs. 10,000/- Per Annum
ii. Additional Medicines at PHCs under CGHS Scheme	Rs. 6,000/- Per Annum
iii. Medicines for Sub-Centres	Rs. 2,000/- Per Annum
iv. Part-time Dai attached with ANM.	Rs. 50/- Per Month
v. Rent for Sub-Centre	Rs. 25/- to 100 p.m.
vi. Misc. Contingencies at Sub-Centres.	Rs. 600/- Per Annum
vii. Misc. Contingencies at PHCs	Rs. 1,200/- Per Annum
viii. Salaries etc at PHC	Rs. 100,000/- Per Annum
ix. Salaries at Sub-Centres (for one ANM)	Rs. 6,000/- Per Annum
x. Following staff is provided at PHC level:	
1. Second M.O.	1
2. Extension Educator	1
3. Lady Health Visitor	1
4. Computer	1
5. Auxiliary Nurse Midwife/Family Welfare Worker	1
6. Stores Keeper-cum-Accountant	1
7. FW Health Asstt.	4
8. Driver (on F.W. Vehicle)	1
xi. POL and minor/major repair for PHC vehicle	Diesel Rs. 8,000/- Per Annum
	Petrol Rs. 12,000/- Per Annum

During 1982-83 the entire State health budget had a deficit of about Rs. 183.18 crores, whereas expenditure was Rs. 188.38 crores.

Question 4: Imprest Money

In U.P. no imprest money has been provided at PHCs. It has been sanctioned at district level in chief medical officer's office.

Imprest money is also called permanent advance. For small, routine expenditure viz. payment of cartage, electricity bills, clearance of RRs. etc. payments can be made from imprest money and thereafter the paid vouchers can be recouped.

Imprest money for an office is fixed by the head of the department in consultation with his chief senior accounts officer. The amount is fixed on the basis of average expenses during the past one year.

The Government have also authorised heads of the offices to draw temporary advance for purchase of petrol/diesel.

Question 5: Travel Advance

Travel advance (TA) claims become due on the date of completion of the journey, and thereafter the T.A. bill can be put up. Often for want of allotment at PHC level these T.A. claims are kept pending. However, if a T.A. Bill is not put up within one year of its becoming due, the claim becomes time-barred. In case a T.A. claim is not drawn within one year from the date of becoming due, sanction of Finance Dept. of U.P. becomes necessary for entertaining the claim.

When there is shortage of allotment T.A. at PHC level additional allotment should be obtained from the CMO, giving full justification and also details of pending bills held up. It may also be explained that said journeys had to be made under higher orders, to comply with government policies or for other public business.

Certain field staff of PHC and sub-centres had also been allowed Fixed Travel Allowance (F.T.A) for journeys in their area of jurisdiction, viz. BEEs, LHVs, ANMs etc. They will be entitled to ordinary T.A. only when they are asked to go beyond their jurisdiction or area of operation.

TA/FTA advances to the staff of the PHC will be sanctioned by the medical officer-in-charge. For temporary staff, necessary bond will also be executed. The T.A. bills of the staff of the PHC are required to be countersigned by the MO in-charge before submission to the Treasury for payment. The TA bills of the medical officers at PHCs shall be countersigned by the CMO concerned.

Question 7: List of Financial Forms

The list of forms, vouchers, receipts, records, registers etc. being used at PHC level is given below:

- | | |
|---|--|
| 1. Cash Book (form No. 2) | To record all receipts and payments. |
| 2. Voucher | Must be complete, duly verified with stock entry: (page number etc. of Stock Book), Correct amount/calculations checked and sanction also enclosed. 'Billed and cancelled' stamp be affixed and signed by the DDO with date.
Vouchers above Rs. 1000/- should be enclosed with contingent bills (in which case office copy or second copy may be retained in office). Vouchers below Rs. 1000/- be kept in office alongwith cancelled second or third copy. |
| 3. 11-C Register | For pay and allowance on Try. Form No. 473 (including T.A. bills) and for contingent bills (Form No. 7) separately. |
| 4. Bill Encashment Register | For bills sent to Treasury. |
| 5. Contingent Bill Register (Form No. 13) | For office copy of contingent Bills. |
| 6. Contingent Bill (Form No. 14) | |
| 7. Pay Bill Register (Form No. 11) | Both for permanent and temporary staff, one pay bill. For class-II gazetted officers, separate bill be prepared. |

8. T.A. Bill (Form No. 12)
9. T.A. Check Register
10. Acquittance Roll (Form No. 11-B)
11. Temporary Advance Bill (Form No. 16)
12. Detailed Contingent Bill (Form No. 17)
13. Register of Pre-adult Bills sent to AG.
14. Register of Payees' stamped Receipts sent to AG
15. Stock Book for medicines
16. Stock Book (Demand Stock and Furniture)
17. Stock Book (Instruments and Equipment)
18. Consumable Stock Register
19. Stock Book of Clothings
20. Stationery Register
21. G.P.F. Ledger Class IV Staff
22. Broad sheet of Class IV staff
23. Index of Class IV staff G.P.F. accounts
24. Pass Books of Class II, III, IV
25. F.W. Temporary Advances Register
26. Service Books/Leave A/c
27. Character Rolls
28. Bank Draft Register
29. BM-9
30. Treasury Form No. 385 (Receipts)
31. Duplicate Keys Register
32. Security of Staff Register
33. Security Bond (Form 2F) for temporary staff.
34. Security Bond (Form 2D) for total amount of security or fidelity bond from insurance company is taken when security is deposited by instalments by the staff. Special pay can be allowed only when the above is fulfilled.
35. Expenditure Register (BM 8).

MODULE 2.8	Functional Responsibilities
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Session 2.8.2. Materials Management

PREAMBLE

There are several types of materials in constant use in a PHC: drugs, medical supplies, general stores, equipment and spare parts, facilities like buildings, water supply etc. Unless they are managed systematically, there will be shortages of regular consumption materials or items of equipment and facilities will be out of order and not available for use, thus hampering the working of PHC.

The test of good materials management is that the right material is available at the right place in right quantity, in right time in order that health services operate smoothly.

OBJECTIVES

The medical officer should be able to:-

1. Define materials management and explain the materials management process.
2. Describe the policies, procedures and proformae used in the materials management system at the PHC and its advantages and disadvantages.
3. Explain the medical officer's responsibilities for the materials management system.

Duration: 1 hour.

<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1. Definition of materials management and description of the process	Lecture discussion	Handout 2.8.2.1
2. Materials management system at PHC-policies, procedures and proformas	Discussion	

TEACHING ACTIVITIES

- | | |
|--|------------------|
| 1. Lecture on materials management-definition importance and objectives of a materials management system. List categories of materials on chalkboard, equipment, drugs, furniture, stationery etc. Describe inventory control methods. (See Trainer Notes 2.8.2.1). | Time
25 mins. |
| 2. Materials Management policies and procedures and proformas for inventory control, indenting, receiving, storing, issuing, using materials; local purchase, repairs and upkeep of equipment; damage/loss of materials. | 25 mins. |
| 3. Summary and evaluation of learning in the module. Ask one participant to summarise what he/she has learnt and how they can use it in their work. Comments from other participants and discussion should follow until the trainer is satisfied that the objectives of the module have been achieved. | 15 min. |

TRAINER NOTES

2.8.2.1 Objectives of Materials Management System

Materials management is concerned with providing the drugs, supplies and equipment needed by health personnel to deliver health services. The right drugs supplies and equipment must be at the right place, at the right time and in the right quantity in order that health personnel deliver health services. Without materials—drugs, supplies and equipment—health personnel cannot work effectively; they feel frustrated and the community lacks confidence in the health services.

Good materials management involves the following procedures:

1. Taking inventory regularly and systematically
2. Requisitioning or indenting according to actual needs, forecast based on previous three years' experience.
3. Receiving and inspecting incoming items.
4. Storing and protecting items.
5. Issuing items for use.
6. Proper use of items.

Categories of Materials used at PHC Level

- | | |
|--------------------------|--|
| 1. Drugs: | Substances used in prevention and treatment of illness; they are in the form of tablets, capsules, solutions, ointments, injections etc. |
| 2. Medical supplies: | Items used alongwith drugs to provide curative and preventive services; example include bandages, cotton wool, needles, syringes, suture material etc. |
| 3. Non-medical supplies: | Non-medical items used by health personnel in providing services; example include fuel, linen, clothing supplies, stationery supplies etc. |
| 4. Equipment: | Movable items used by the personnel which last for many years; example include desks, tables, beds, refrigerators, vehicles etc. |
| 5. Facilities: | Non-movable items used by health personnel for many years; example include buildings, latrines, wells, fencing etc. |

With inventory control of drugs, medical supplies and non-medical supplies medical officer is primarily concerned. He is also concerned with regular replenishment of items. With equipment and facilities regular proper use and preventive maintenance (checking equipment and facilities regularly to keep them in good condition is called preventive maintenance.)

The lack of proper materials management results in overstocking (causing increased losses from pilferage and waste due to spoilage) or understocking (causing shortages and hardship). For a PHC, three months' supply is considered to be appropriate stock level for most items.

2.8.2.2 Materials Management: Policies and Procedures

Materials management systems differ from State to State. But, by and large, procurement of supplies is made by the Central Medical Stores Depot. They are dispatched to the district and from there to the primary health centres. The primary health centre has to estimate its demands based on the disease pattern and the average demand for drugs in the past three years.

The trainer has to describe the concept of inventory control, proper indenting procedures, maintaining proper registers and taking timely action towards replenishing stock.

In a tropical country like India, stores are extremely susceptible to deterioration due to high temperatures, humidity and rainfall. Therefore steps to prevent avoidable damage to stores need to be highlighted.

Facilities and equipment are of use to health personnel and patients only if they are in good condition. The medical officer must also, therefore, take steps to maintain facilities and equipment.

The medical officer PHC should prepare an inventory of facilities and equipment, establish and carry out a programme of regular preventive maintenance, and report damage or theft of equipment to higher authorities.

Guidelines for Materials Management at a PHC

1. Indenting medical officer should review outpatient and inpatient records for the past three or four years and see the types of services provided. He should then estimate the type and appropriate quantity of standardised items. Lists are usually drawn up at the State or district levels. Indenting should be timely, of course, allowing for appropriate time lag from the date of previous indent.
2. Proper bottling, accounting and labelling are necessary for proper management of drugs.
3. Proper arrangement of the store is also important. Items should be organised so that it is possible to locate any item within a few seconds. Labelling should be accurate. An index of items should be available in the store. Every store item should have tally card with an up-to-date and accurate stock on hand. The medical officer should check the tally cards regularly.
4. Maintenance of equipment is important. Instruments will rust if they are not oiled regularly. Rubber goods will deteriorate if not preserved with powder. The vehicle needs regular servicing by a trained mechanic.
5. Inventory control or accounting of stores is essential. Without proper control it is not possible to know to whom medicines have been given and how they have been utilised. This information is very important from the audit point of view. Without proper control, it is not possible to know which items are available. The stock register, which give receipts, issues, and balance for each supply item, should be checked by the medical officer at least once every month, and he should make physical verification of the drugs alongwith register. Medical officers may check 4 or 5 items at random every day, so that over a period of time all items will be checked.
6. Training of staff in the proper use and handling of supplies and equipment is important. Such training can be made part of the continuing education programme at the PHC. Proper preservation of drugs must be adhered to; use of drugs before the expiry date should be ensured.
7. Prompt reporting of loss, theft or damage so that repairs can be made or replacements provided. If any of the items need to be condemned as beyond repair, appropriate procedure should be followed and article so condemned should be replaced. The condemnation power vests with the chief medical officer of the district. However, it is for the medical officer-in-charge of PHC to bring to the knowledge of the chief medical officer the list of such stores and equipment that needs to be condemned, alongwith reasons. History sheet for each non-consumable store should be maintained at the PHC which should give the following

information:

(a) date of purchase, (b) source of purchase or procurement, (c) cost at the time of purchase, (d) cost of maintenance including repairs, and (e) reasons for condemnation of the item.

Carrying out routine preventive maintenance of equipments is important.

Inventory Control

1. Intuitive Method: The most simple method perhaps appropriate for a small sub-centre with good access to a PHC.
2. Perpetual inventory Method: Most commonly used; appropriate for PHC, but pharmacist must be diligent in record keeping. Not appropriate for sub-centres.
3. ABC Method: Most sophisticated method; appropriate for district and State levels, but probably not appropriate for PHCs.
4. VED Method: A practical method; potentially appropriate for PHC and sub-centres, but the medical officer would have to take the lead in introducing the method.
5. Two-Bin Method: Also a practical method, appropriate for sub-centres, but probably not appropriate for PHCs.

Session 2.8.3. Vehicle Management

PREAMBLE

Vehicles apart from being a great facility can be a source of endless problems to a Medical Officer unless he is ever vigilant about its use and upkeep. To do so, he must know enough about their technical aspects and the authorised ways of using them. Drivers and mechanics have a great temptation to mislead a Medical officer when they know that he is not knowledgeable about fuel consumption or repairs and spare parts.

OBJECTIVES

The medical officer should be able to:-

1. Determine priorities for the use of the PHC vehicle
2. Describe the policies, procedures and proformae governing the use of the vehicle
3. Explain the medical officer's responsibility in managing the vehicle.

Duration: 1 hour.

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	Use of a vehicle at a PHC	Exercise 2.8.3.1	Chalkboard
2.	Vehicle management policies, procedures and proformae regarding: — how, when, where vehicle may be used — persons authorised to drive vehicle	Discussion Lecture	Vehicle Regulations log Book.

- selection of driver and training
- daily vehicle maintenance by driver
- routine preventive maintenance at district level.
- reporting accidents, damage or breakdowns.

TEACHING ACTIVITIES

	Time
1. Divide the participants into pairs. Give each a copy of exercise 2.8.3.1. Ask each pair to list and then rank according to priority, eight major uses of the PHC vehicle.	15 min.
2. Reassemble the class. Ask participants and write these uses on the chalkboard. Discuss ranking. Possible uses include. <ul style="list-style-type: none"> a. Transporting referral cases to hospital. b. Bringing emergency cases from sub-centre. c. Picking up supplies at district hospital. d. Delivery of supplies to sub-centre. e. Transport for special campaigns/camps. f. Lending vehicles to CMO at district level. g. Supervisory visits to sub-centre. h. Attending meetings at district level. i. Putting vehicle in workshop for maintenance. j. Personal use. k. Attending meetings in community. 	20 min.
3. Ask the participants to rank the list of uses from step 2 above using the following format.	10 min.

Uses of PHC Vehicle	Ranking			
	Group 1	Group 2	Group 3	Group 4
1. Transporting referral cases to hospital				
2. Delivering supplies for sub-centres.				
3. Transport for special campaigns/camps.				

4. Lecture on vehicle management—policies, procedures, proformae. Bring copies of all proformaes used in vehicle management—log books etc. and explain their purpose and how to use them. Focus the lecture on the MO's responsibilities in managing the vehicle. An assistant engineer (transport maintenance) may be invited to deliver this lecture (See trainer notes 2.8.3.1). 15 min.

TRAINER NOTES

2.8.3.1 Uses of PHC Vehicles

PHC vehicles are classified into two categories:

1. General, and
2. Family Welfare

The general vehicle is supplied by the State Directorate of Health, and is under the administrative control of the Directorate. It may be used to support any PHC programme or activity.

The family welfare vehicle is supplied by the central government. It may be used to support only the family welfare programme and family welfare activities.

Type of PHC Vehicles

1. Jeep
2. Standard 20
3. Matador
4. Ambassador

Type of Vehicle Maintenance

1. Daily maintenance
2. Regular periodic servicing
3. Major overhaul

In vehicle management, as in patient management, prevention is better than cure.

Difference between Petrol and Diesel Engines

Petrol	Diesel
1. Fuel is petrol	1. Fuel is diesel
2. Ignition by means of an electric spark from a battery	2. Ignition by means of heat developed by compressing air.
3. Parts needed: carburettor, spark plugs, ignition coil, battery	3. Parts needed: feed pump, diesel injection pump, nozzles

Petrol engines contain more parts, and therefore are more difficult to maintain. Diesel engines last much longer time than petrol engines.

Exercise 2.8.3.1 Worksheet for Exercise. Determining Priorities for the PHC Vehicle.

Part 1

Work with your partner to list six major uses of PHC vehicle. Then rank these uses according to priority. Number them 1 through 6 in column 'Rank of Importance' with number 1 being the highest priority.

No.	Uses of Vehicle	Rank of Importance
1.		
2.		
3.		
4.		
5.		
6.		

Part II

Work with your group to rank the uses of the PHC vehicle. Use a consensus approach to decide on the ranking.

No.	Uses of Vehicle	Consensus Rank
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

PREAMBLE

The MO(PHC) and his team have to maintain records, register compile the progress of the work done in the area during the month and submit reports regularly and on time. He has to understand the importance of maintaining these records, follow the system of collection, compilation and submission as laid down in the orders. He should be able to interpret the data and utilise it for corrective measures, planning and evaluating his activities and providing supervision and guidance to his workers.

OBJECTIVES

The MO should be able to:-

1. Prepare a list of the various records/register to be maintained and reports to be submitted by him.
2. Compile and interpret the data and utilise the findings for corrective measures, planning and evaluation.
3. Evaluate his data and utilise it for guidance and supervision of his workers.

Duration: 1 hour.

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	Records/register to be maintained and reports to be submitted to and by M.O.	Review	Copies of records and reports at PHC level.
2.	HMIS, definition and objectives of HMIS, importance of records and reports, responsibility for their preparation, flow of information and time frame; guidance to workers on problems encountered in maintenance and submission of records and reports.	Lecture	
3.	Interpretation of data; corrective action to be taken; utilisation of data for planning and evaluation of programme at PHC level.	Lecture Discussion	Slides/Charts
4.	Evaluation—need and importance process, types of evaluation: use of evaluation findings at PHC level and for guidance and supervision of workers.	Lecture	Slides/Charts

TEACHING ACTIVITIES

- | | Time |
|--|-------------|
| 1. The participants will be distributed samples of the various records/ registers to be maintained at sub-centres/PHC level and report to be submitted <i>every month</i> . | 15 min. |
| 2. This session will relate HMIS to the PHC level and will concentrate on on problems in the maintenance of records/register, preparation and submission of reports on time, and on guidance to be given to workers. This session will be a problem-solving session. | 30 min. |
| 3. This session will relate the need, importance, process and types of evaluation to the PHC level. This session will also concentrate on the use of evaluation findings for the guidance and supervision of workers. | 15 min. |

N.B.

HMIS has to be a part of every health programme, maintenance of the basic records and reporting is required to be redefined while discussing the individual programme management.

TRAINER NOTES

- 2.9.1 For all sessions, the Trainer must emphasise that the M.O. can utilise the findings of his data and its evaluation for planning of programmes and providing guidance to his worker.

3.0 INFORMATION EDUCATION COMMUNICATION

MODULE 3.1

Information, Education and Communication(IEC)

PREAMBLE

The Medical Officer (PHC) has to understand the phenomenon that change in health behaviour of the community can be brought about by introducing systematically IEC component as an integral part of Health Services & inducting it in the activities of all Health personnel.

For promoting desirable health practices and enhancing the community participation in primary health care and other related preventive & promotive aspects of integrated Health and FW programme, the Medical Officer (PHC) has to properly and aptly apply information, education and communication techniques through the team of health staff.

Being leader of the team MO(PHC) has to prepare the yearly action plan, organise & implement communication programmes through health functionaries who are well equipped & conversant, with communication skills. For optimum utilisation, upkeep and maintenance, storage & distribution of A.V. equipments and printed materials it may be ensured that Medical Officer (PHC) provides adequate direction guidance and encourage production of local educational materials.

OBJECTIVES

The MO(PHC) should be able to:-

1. Operationalise communication strategy in the PHC area.
2. Develop & implement annual action plan of IEC activities in view of the local needs and requirements.
3. Supervise & monitor the programme activities through effective guidance and demonstration.

Duration: 2 hours

<i>Contents</i>		<i>Method</i>	<i>Aids</i>
1.	Revised Communication Strategy & its operationalisation	Lecture & discussion	Handout 3.1 Chalk & Board
2.	Plan of IEC activities including O.T. camps, Population Education for women & campaigns etc.	Exercise and discussion	Handout 3.2 Handout 3.3

	<i>Contents</i>	<i>Method</i>	<i>Aids</i>
3.	Mobilisation of resource	Lecture discussion	
	a) Training in IEC for Health personnel		
	b) Use, upkeep & maintenance of A.V. equipments & Educational Aids.		
	c) Production of local Health Education Materials.		

TEACHING ACTIVITIES

		Time
1.	The participants will be distributed Handouts 3.1, 3.2., 3.3 a day before the session and asked to come prepared for discussion.	—
2.	A Health Education/Mass Education specialist will take a session on on communication for health, reviewing with the participants the qualities of a good communication and how the M.O. should utilise every opportunity to communicate to members of the community the various health practices.	1 hour
3.	The participants will be divided into 2 groups and will take up the two topics, one each, for discussion;	30 min.
	a) Role of M.O. to inform, educate and communicate new messages to the community.	
	b) M.O.'s role in providing guidance to the PHC Health team in IEC activities.	
4.	The participants will reassemble and read out their reports. Each report will be followed by a general discussion on practical ways of fulfilling the M.O.'s role in IEC activities.	30 min.

TRAINER NOTES

- 3.1 The participants will be given handouts 3.1, 3.2, 3.3 a day before the session and asked to come ready for discussions.
- 3.2 A Health Education/Mass Education specialist will take a session on Communication for health. He will speak on principles of Communication and on qualities of a good communicator. He will help them identify opportunities for education in various health programmes.
- 3.3 The third session will be a group discussion when each group will discuss one topic. The Trainer may decide to request the participants to discuss the topic in relation to a specific programme e.g. Family Planning, Child Care etc.
- 3.4 The participants will reassemble and the Trainer will steer the discussion towards clarifying to participants what they can do to inform and educate the community effectively about new health practices.

4.0 MCH AND FAMILY WELFARE PROGRAMMES

MODULE 4.1

National Family Welfare Programme

PREAMBLE

The National Family Planning Programme started in 1951 with a clinical approach. Extension approach was adopted in mid-sixties and since late seventies the Family Planning service delivery system has gradually expanded into a community oriented service network in which family planning services are offered as part and parcel of the overall health package of services particularly the maternal and child health and nutrition activities. Although, reduction in birth rates over the years has fallen short of the plan targets, the programme has made a significant impact on fertility. During 1970's, the birth rate declined from 40 to 34, but during 1979-84, it had been stagnant around 33. In 1985, it has come down to a level of 32.9.

As the success of all programmes depends on the success of the Family Welfare Programme, the M.O. has to see that an integrated approach is practised by his health team, the members of the community become participants and the programme becomes a people's voluntary movement in his area.

OBJECTIVES

The participant should be able to:-

1. List the various aspects of the new strategy of the Family Welfare Programme.
2. Guide and supervise his workers in the implementation of the programme.
3. Educate the community about the new features of the Family Welfare Programme and the benefits to them.
4. Involve the community and members of other sectors in the formation of Block and village level committees for the planning, implementation and evaluation of the Programme.

Duration: 1 hour

<i>Contents</i>		<i>Method</i>	<i>Aids</i>
1.	Revised strategy of the Family Welfare Programme	Review	Handout 4.1.1
2. (a)	Guidance and supervision to his workers in the implementation of the programme.		
(b)	Education of the Community about the various aspects of the Family Welfare Programme and the benefits to them.	Group Discussion	

	<i>Contents</i>	<i>Method</i>	<i>Aids</i>
(c)	Involvement of community and members of other sectors in the formation of Block and village level committees for the planning, implementation and evaluation of the programme.	Group Discussion	

TEACHING ACTIVITIES

		Time
1.	The participants will be given Handout 4.1.1 a day before the session for review.	—
2.	The participants will be divided into 3 groups. Each group will discuss topics under one of the three objectives numbered 2 to 4 with a view to identify the problems in action and how they can overcome them.	30 min.
3.	The participants will reassemble and present their reports. Each report will be followed by a general discussion leading to an agreed action plan.	30 min.

TRAINER NOTES

- Handout 4.1.1 will be distributed a day before the session. The participants should be asked to study it carefully.
- The participants will be divided into 3 groups. Each group will discuss only one of the three objectives numbered 2 to 4. The Trainer will instruct the groups to concentrate on the problems likely to arise in meeting the objective and how they propose to overcome them.
- The participants will present their reports in brief and general discussion will follow after each report. The Trainer may ask one of the participants to list on the blackboard points mentioned in each report and lead the discussion to evolve a list of specific actions to be taken to implement provisions of the revised strategy.

MODULE 4.2 Family Planning Services

PREAMBLE

Family Planning services are offered through the total health care delivery system. People's participation is sought through all institutions, voluntary agencies, opinion leaders, people's representatives and government functionaries. Imaginative use of the mass media and interpersonal communication is resorted to for explaining the various methods of contraception and removing the socio-cultural barriers wherever they exist. As a result of this strategy, the number of acceptors of various methods of family planning has started registering an increase from year to year.

The M.O. (PHC) has a very important role to play so that more eligible couples accept family planning.

OBJECTIVES

The M.O. should be able to define his role in the family planning programme at the PHC level.

Duration: 2 hours

	<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1.	Duties of MO(PHC) with regard to Family Planning	Review	Handout 4.2.1 Handout 4.2.2
2.	Role of MO with regard to F.P. Programme in: a) Education and motivation for family planning. b) Coordination with other agencies and sectors in PHC area c) Delivery of services and after care d) Management of camps and campaigns e) Guidance and supervision to workers regarding the F.P. programme activities f) Evaluation of the F.P. programme in PHC area.		
3.	Presentation of reports of the 3 groups followed by discussion.	Group presentation and discussion.	

TEACHING ACTIVITIES

		Time
1.	The participant will be given Handout 4.2.1 to refresh their minds about their duties in the F.P. Programme.	—
2.	The participants will be divided into 3 groups. Each group will discuss in respect of the topics indicated below the role of MO, the tasks/activities he will perform to fulfil this role, the problems he may face and the solutions to them. Group 1. a) education and motivation of F.P. b) coordination with other agencies & sectors in PHC area. Group 2. a) delivery of services & after care b) management of camps & campaigns Group 3. a) guidance and supervision to workers regarding the F.P. programme activities b) evaluation of the programme in PHC area.	1 hour

3. Reports of the three groups will be presented followed by general discussion after each report.
- 1 hour

TRAINER NOTES

- 4.2.1 Duties of M.O. PHC in regard to Family Planning (handout 4.2.1, 4.2.2) will be distributed to the participants a day before the session to refresh their minds about their duties in the family planning programme.
- 4.2.2 The participants will be divided into 3 groups. Each group will discuss the topics assigned to them. Specifically, the group will focus on the tasks, activities the MO(PHC) will perform to fulfil his role and problems he may face as well as the solutions to the problems.
The group reports will be presented. Each group report will be followed by general discussion. The Trainer will keep the discussion centred on specific points useful for furthering the MO’s role in family planning. He will emphasis that limitations and constraints are bound to be found to over come them or work within these limitations to achieve the maximum possible results.

MODULE 4.3	Maternal and Child Health Programme
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PREAMBLE

In any community mothers and children constitute a priority group needing health care. In India women of child bearing age constitute 22 per cent and children under 15 years constitute 42 per cent of the total population. Together, they constitute nearly 65 per cent. By virtue of their numbers, mothers and children are major consumers of the health services.

Mothers and children constitute not only a large group but they are also a ‘vulnerable’ group. The vulnerability or risk is connected with child bearing in women and growth, development and survival in the case of infants and children.

The M.O. has therefore to able to provide MCH services and guide his workers to do so.

OBJECTIVES

- The M.O. should be able to:-
1. Organise and provide MCH services through his team.
2. Guide his workers in applying the risk approach.

Duration: 2 hours.

Contents	Methods	Aids
1. MCH Services	Review	Handout 4.3.1

Contents	Methods	Aids
2. Role of M.O. PHC in providing MCH Services	Review	Handout 4.3.2
3. Risk approach and management of MCH problems.	Lecture Discussion	—

TEACHING ACTIVITIES

- | | Time |
|---|-------------|
| 1. The participants will be given Handouts 4.3.1 and 4.3.2 a day before the session. They will prepare a list of problems they have in applying the risk approach and management of MCH services. | — |
| 2. The Trainer will list the problem prepared by the participants on the black board and classify them. The Trainer will then lead a discussion and assist the participants find solutions to their problems. | 2 hours. |

TRAINER NOTES

- Handout 4.3.1 and 4.3.2 will be distributed a day before the session. The participants should be asked to study it carefully.
- The participants will be divided into 3 groups. Each group will discuss both objectives numbered 1 to 2. The Trainer will instruct the groups to concentrate on the problems likely to arise in meeting the objectives and how they propose to overcome them.
- The participants will present their reports in brief and general discussion will follow after each report. The Trainer may ask one of the participants to list on the blackboard points mentioned in each report and lead the discussion to evolve a list of specific actions to be taken to implement provisions of the revised strategy.

MODULE 4.4 Approach to Infant and Child Care

PREAMBLE

High infant mortality rate, high levels of morbidity, high incidence of nutrition—related diseases, these are some of the prospects facing children under six years of age.

It is now possible to save low birth weight babies and improve the health of the infants and the child by four rapid results. Some of these measures can be practised at home by the mother and some have to be carried out at sub-centre/primary health centres. These measures are care of the new born and special care of low birth weight, growth monitoring, oral rehydration, breast feeding and immunisation. Three more steps, if taken, would also go a long way in improving the health of the child. These are food supplements, family spacing and female education.

In 1975, the Government of India formulated a comprehensive child survival and development scheme drawing on the resources of the Centre, State, Voluntary Organisations and Communities themselves, viz., the Integrated Child Development Services (ICDS) Scheme.

The M.O. (PHC) and his staff have a major role to play in infant and child care.

OBJECTIVES

The M.O. should be able to provide and supervise:

1. Child and infant care activities at sub-centre and primary health centre and community level.
2. The health components of the ICDS Scheme through his health workers and supervisors.

Duration: 2 hours

<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1. Child and infant care	Review	Handout 4.4.1
2. Integration Child Development Services	Review	Handout 4.4.2.
3. Role of M.O. in management of		
i. Child and infant care activities at PHC/Sub-centre and community level.	Discussion	Cards
ii. Health components of ICDS		

TEACHING ACTIVITIES

1. The participant will be given Handout 4.4.1 and 4.4.2, 4.4.3 a day before the session and will come prepared to discuss problems in the management of child care activities. —
2. The Session will be a general discussion on problem in the management of:
 - i. Child care activities at the PHC/Sub-centre and community level. 1 hour
 - ii. Health components of ICDC. 1 hour.

TRAINER NOTES

- 4.4.1 The Trainer will distribute Handout 4.4.1 and 4.4.2, 4.4.3 to the participants a day before the session and ask the participants to prepare a list of problems in the application of risk approach and management of MCH problems.
- 4.4.2 The trainer will list all the problems on the black board, classify them and then lead the discussion and assist the participants find solution to the problem.

PREAMBLE

The Immunization programme in India is part of a world wide programme to protect all children against six diseases, viz., diphtheria, whooping cough, tetanus, tuberculosis, polio and measles, by 1990. It is a centrally sponsored scheme.

The successful implementation of immunization requires planning, management and existence of adequate infrastructive and motivated personnel to do the job.

The MO has to plan and manage the immunization programme in his area and should attempt, with the assistance of his health team, to attain the target of immunization of 85 per cent of total infants and 100 per cent prenatal women in his area.

OBJECTIVES

The M.O. should be able to:-

1. Describe the components of the Universal Programme on Immunization (UPI).
2. Find solutions to the problems faced during the management of UPI in his area.

Duration: 1 hour (Classroom)

	<i>Contents</i>	<i>Method</i>	<i>Aids</i>
1.	Universal Programme on Immunization	Review	Handout 4.5.1
2.	Problems faced during the implemtation of UPI	Problem-solving Session	Charts/Slides etc.

TEACHING ACTIVITIES

Time

1. The participants should be given Handout 4.5.1 a day before the session for review. They should prepare a list of problems they faced in the implementation of the programme.
2. This will be a problem-solving session. A list of the problems in the management of the programme will be posed by the participants. The group with the assistance of the Trainer will develop solutions to them.

1 hour

TRAINER NOTES

- 4.5.1 The Trainer will distribute Handout 4.5.1 a day before the session and the participants will be asked to review it and prepare a list of problems faced by them in the management of the Programme.
- 4.5.2 The Trainer will list on the backboard the problems faced by the participants in the management of UPI. The Trainer will assist the participants in finding solutions to these problems after thorough discusion.

PREAMBLE

Malnutrition in children presents a major public health problem in our country. The problem of malnutrition is seen more in children below the age of six years. The vicious cycle of poverty, malnutrition and infection has to be combated through integrated efforts of socio-economic development, better nutrition and control of infection.

The M.O. has a definite role to play to break this vicious cycle by education of mothers about prevention, and early diagnosis and treatment.

OBJECTIVES

The medical officer should be able to:-

1. Describe the National Programmes in Nutrition
2. Detect early a case of malnutrition amongst preschool children.
3. Manage the case of malnutrition.
4. Supervise his workers in their job responsibilities.
5. Educate the community on the prevention and management of malnutrition in children.

Duration: 1 hour (Classroom): 30 min. Clinic

30 min. Classroom.

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	National Programmes in Nutrition	Review by Participants	Handout 4.6.1
2.	Malnutrition amongst preschool children	Review by participants	Handout 4.6.2
3.	Detection and management of different types of malnutrition in preschool children	Clinical session	Malnourished preschool Children or slides as necessary.
4.	M.Os. role in:		
	a) Supervision of workers	Group discussion	
	b) Education of the community		

TEACHING ACTIVITIES

- | | | |
|----|---|---------|
| 1. | Handout 4.6.1 and 4.6.2 will be given to the participants a day before the session (see Trainer Notes 4.6.1) | — |
| 2. | Detection and management of different types of malnutrition will be taken by a pediatrician either in the clinic or the classroom (see Trainer notes 4.6.2) | 20 min. |
| 3. | The participants will be divided into 2 groups. Each group will discuss one topic of the M.Os role. Emphasis will be on problems and solutions. (see Trainer notes 4.6.3) | 20 min. |
| 4. | The participants will reassemble and each group will present important points from their discussion. These will be discussed by the class as a whole. (see Trainer Notes 4.6.4) | 20 min. |

TRAINER NOTES

- 4.6.1 Handouts 4.6.1 and 4.6.2 will be distributed to the participants a day before the session. The participants will review the material and refresh their memory about the Programmes in Nutrition and Malnutrition in pre-school children.
- 4.6.2 The second session will be taken by a pediatrician, preferably in the clinic pre-school children suffering from various manifestations of malnutrition will be demonstrated. Discussions will focus on the M.O.'s role in the early detection and management of malnutrition.
- 4.6.3 The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and their solutions. The Trainer will steer the group away from discussing methodology and treatment.
- 4.6.4 The participants will reassemble and each group will present important points of discussion. More time should be spent on discussion, rather than on presentation of reports.

MODULE 4.7 School Health Programme
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PREAMBLE

School health programme aims at achieving better health for school childrens by promotion of positive health, prevention of disease and awakening health consciousness in children through health education, in a clean and healthy environment. It lays the foundation of good health in a child and thus helps to build up healthy citizens with positive attitudes.

The MO will arrange and conduct medical check-ups, immunization and treatment and health education for the pupils. His role therefore is an important one in the school health programmes.

OBJECTIVES

The MO should be able to:-

1. Define his role in the school health programme.
2. Maintain and use school health records.

Duration: 1 hour (Classroom)

<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1. MO's role in a) The school health programme and b) Maintenance and use of school health records.	Question-answer-discussion	Handout 4.7.1 Charts, School Health Records

TEACHING ACTIVITIES

Time

1. The participants will be given Handout 4.7.1 a day before the session and will come prepared to answer questions.
2. The speaker will ask questions to the participants and will discuss the answers.

1 hour

TRAINER NOTES

Handout 4.7.1 will be distributed to the participants a day before the session. The participants will be asked to come prepared to answer questions.

The trainer will brief the speaker to ask questions of the participants and discuss their answers and not use the lecture method. The Trainer will also provide to the speaker copy of the student's health record booklet produced by DGHS, Ministry of Health and Family Welfare, Government of India. A copy of this booklet is attached.

5.0 NATIONAL HEALTH PROGRAMMES

MODULE 5.1

National Malaria Eradication Programme

PREAMBLE

The National Malaria Eradication Programme of India is the world's biggest health programme against a single communicable disease and continues to be the country's most comprehensive and multifaceted public health activity.

The M.O. (PHC) has many roles to play in the execution of this programme as manager, public health specialist, physician, supervisor, Trainer and educator. He has to play all these roles effectively to implement the programme successfully.

OBJECTIVES

The Medical Officer should be able to:-

1. Describe
 - a) The modified plan of operation for the National Malaria Eradication Programme (NMEP)
 - b) The basic epidemiological factors of Malaria.
2. Diagnose and take preventive and curative measures against Malaria.
3. Supervise and guide his workers in their responsibilities in N.M.E.P.
4. Educate and involve the community in preventive and curative measures against Malaria.

Duration: 2 hours (Classroom)

	Contents	Methods	Aids
1.	a) Modified plan of operation for NMEP	Review by participants	Handout 5.1.1
	b) Epidemiological factors of Malaria	Review by participants	Handout 5.1.2
2.	M.O.'s role in the diagnosis, preventive and curative aspects of Malaria including treatment and management of P. Falciparum Malaria and cerebral Malaria cases.	Lecture Discussion	Slides as required
3.	a) Supervision of health workers in their responsibilities in NMEP— Problems & Solutions	Group discussion	
	b) Education and involvement of the community in preventive and curative measures-Problems and solutions.		

TEACHING ACTIVITIES

- | | Time |
|---|-------------|
| 1. Handouts 5.1.1 and 5.1.2 regarding (a) National Malaria Eradication Programme and epidemiological factors of Malaria to be distributed to the participants a day before the session for review. (see Trainer Notes 5.1.1). | — |
| 2. This session will be taken by a malarialogist. It will consist of 1 hour of lecture followed by an hour of discussion. (see Trainer Notes 5.1.2). | 1 hour |
| 3. The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and solutions. (see Trainer Notes 5.1.3) | 30 min. |
| 4. The groups will reassemble and present main points of the reports, followed by discussion (see Trainer Notes 5.1.4). | 30 min. |

TRAINER NOTES

- 5.1.1 Handouts 5.1.1 and 5.1.2 will be given out to the participants a day before the session, with instructions to them to read them and refresh their memory about the programme and the disease.
- 5.1.2 For the second session, a malarialogist may be invited for taking session. He must be briefed on the coverage of the subject as under:-
Latest developments in the diagnosis, and preventive and curative aspects of Malaria including Treatment and management of P. Falciparum malaria and cerebral malaria cases. He must highlight the role of the M.O. in these activities. He must also emphasise when the M.O. should refer cases to the hospital. The lecturer must speak for not more than one hour and leave at least half an hour for discussion.
- 5.1.3 For the third session the participants will be divided into 2 groups, each group taking one topic for discussion. The groups will tend to discuss methodology of supervision and education. The Trainers will have to steer the discussion away from methodology to problems faced in the field by M.Os and their workers and solutions suggested by the group.

MODULE 5.2

National Filaria Control Programme

PREAMBLE

Filaria is a major public health problem in India. About 342 million population is living in know endemic areas, out of which about 82 million are in urban areas and the rest in rural areas.

In endemic rural areas, the medical officer has therefore to play a major role in the management of cases, health education of the community and in the supervision of workers in their responsibilities in the programme.

OBJECTIVE

The medical officer should be able to:-

1. Describe
 - (a) the National Filaria Control Programme.
 - (b) the basic epidemiological factors relating to Filariasis.

(c) Japanese Encephalitis.

2. Diagnose and treat cases of Filariasis.
3. Supervise his workers in their responsibilities in these programmes.
4. Educate the community about preventive measures against filariasis and Japanese Encephalitis.

Duration: 1 hour

<i>Contents</i>		<i>Methods</i>	<i>Aids</i>
1.	a) National Filaria Control Programme	Review by Participants	Handout 5.2.1
	b) Epidemiological factors relating to filariasis	Review by Participants	Handout 5.2.2 Handout 5.2.3
2.	The role of the M.O. in the diagnosis, preventive and curative treatment of filariasis	Lecture Discussion	i. Patients ii. Slides as necessary
3.	Responsibilities of field staff in the	Group	
	a) Filariasis Programme — problems & solutions	Discussion	
	b) Japanese Encephalitis		
	c) Health education of community about Filariasis and Japanese Encephalitis— problems and solutions.		

TEACHING ACTIVITIES

- | | |
|--|---------|
| 1. Handouts 5.2.1 and 5.2.2 regarding (a) National Filaria Control Programme (b) Epidemiological factors of Filariasis and (c) Handout 5.2.3 to be distributed to the participants a day before the session for review. (see Trainer Notes 5.2.1). | — |
| 2. Diagnosis, preventive and curative treatment of Filariasis. This session will be taken by a specialist either in the clinic or class room. (see Trainer Notes 5.2.2) | 30 min. |
| 3. The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and solutions (see Trainer Notes 5.2.3). | 30 min. |

TRAINER NOTES

- 5.2.1 The handouts 5.2.1 and 5.2.2 will be distributed to the participants a day before the session. The participants will read the handouts and refresh their memory about the programme and the disease.

- 5.2.2 For the second session, a specialist may be invited and he must be briefed on the coverage of the subject expected as under:-
Latest developments in the diagnosis, preventive and curative aspects of Filaria. He must highlight the role of the M.O. in these activities.
- 5.2.3 Discuss responsibilities of field staff in the
(a) filariasis Programme
(b) Japanese Encephalitis.

MODULE 5.3	National Leprosy Eradication Programme (NLEP)
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PREAMBLE

Leprosy is still a major public health and social problem inspite of National Leprosy Control Programme since 1955. Over 400 million population is covered with an infrastructure created under NLEP.

The M.O. (PHC) has to play an important role in the early detection of cases and in providing therapy and follow-up.

OBJECTIVES

The medical officer should be able to describe:-

- a) the National Leprosy Eradication Programme.
- b) the basic epidemiological factors of Leprosy.
2. Diagnose and take preventive and curative measures against Leprosy.
3. Supervise and guide his workers in their responsibilities in NLEP.
4. Educate and involve the community in preventive and curative aspects of Leprosy.

Duration: 2 hour: 1 hour(Class room)
1 hour(Clinic)

<i>Contents</i>		<i>Methods</i>	<i>Aids</i>
1.	a) Plan of operation NLEP b) Epidemiological factors of Leprosy	Review by participants Review by participants	Handout 5.3.1 Handout 5.3.2
2.	M.O.'s role in the NLEP a) Early detection of cases and confirmation of diagnosis b) Treatment and follow-up of cases.	Clinical Session	Leprosy patients/slides as necessary.

- | | | | |
|----|----|--|---|
| 3. | a) | Supervision of workers in their responsibilities in NLEP –problems and solutions | Group disucssion and presentation of reports discussion |
| | b) | Education and involvement of the community in preventive and curative measures. | |
-

TEACHING ACTIVITIES

- | | Time |
|--|-------------|
| 1. Handouts regarding a) National Leprosy Eradication Programme and b) Epidemiological factors of Leprosy to be distributed to participants a day before the session for review: (see Trainer Notes 5.3.1). | — |
| 2. A clinical session in which the Leprosy specialist will demonstrate on Leprosy patients methods of early detection. Review confirmation of diagnosis, treatment and follow-up of cases (see Trainer Notes 5.3.2). | 1 Hour |
| 3. The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and solutions (see Trainer Notes 5.3.3). | 30 min. |
| 4. The participants will reassemble and points of the reports will be present and discussed (see Trainer Notes 5.3.4) | 30 min. |

TRAINER NOTES

- 5.3.1 The handouts 5.3.1 and 5.3.2 will be distributed to the participants a day before the session. The participants will read the handouts and refresh their memory about the Programme and the disease.
- 5.3.2 For the second session, a specialist may be invited and he must be briefed on the coverage of the subject expected as under:-
Latest developments in the diagnosis, preventive, curative and rehabilitative aspects of Leprosy. He must highlight the role of the M.O. in these activities.
- 5.3.3 For the third session, the participants will be divided into 2 groups, each group will take one topic for discussion. The groups will tend to discuss methodology of supervision and education. The trainer will have to steer the discussion away from methodology to problems faced by M.Os. and their workers and solutions suggested by the group.
- 5.3.4 At the presentation of group reports, the trainer will have to ensure that only the main points are reported and that no points are repeated by the second group. Time should be available for discussion after each group report. Copies of the points may be distributed to the participants the next day.

PREAMBLE

Tuberculosis is a major public health problem in India. WHO defines that tuberculosis 'control' is said to be achieved when the prevalence of natural infection in the age group 0-14 years is 1%. In India at present it is about 40%. This means that we have to go a long way to reach the goal set out by the WHO. The role of the M.O. (PHC) therefore becomes very important in the programme.

OBJECTIVES

The medical officer should be able to :-

1. Describe
 - a) the National Tuberculosis Control Programme.
 - b) the basic epidemiological factors of Tuberculosis.
2. Diagnose and take preventive and curative measures against TB.
3. Supervise and guide his workers in their responsibilities in NTCP.
4. Educate and involve the community in preventive and curative aspects of Tuberculosis.

Duration: 1 hour

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	(a) The national Tuberculosis Control Programme	Review by participants	Handout 5.4.1
	(b) Epidemiological factors of Tuberculosis	Review by participants	Handout 5.4.2
2.	MO's role in the NTCP		
	(a) Early detection of cases and confirmation of diagnosis	Lecture discussion	Slides/charts as necessary
	(b) Treatment and follow-up of cases		
3.	(a) Supervision of workers in their responsibilities in the TB programme	Discussion	
	(b) Education and involvement of the community in preventive and curative measures	Discussion	

TEACHING ACTIVITIES

1. Handouts 5.4.1 and 5.4.2 regarding National TB Control Programmes and

Time

—

Epidemiological factors of TB to be distributed to the participants a day before the session for review (see Trainer Notes 5.4.1).

2. Session will be taken by a TB specialist who will cover the subject under the headings as emunerated in the 'contents'. This will be followed by discussions. 1 hour

TRAINER NOTES

- 5.4.1 The handouts 3.4.1 and 3.4.2 will be distributed to the participants a day before the session. The participants will read the handouts and refresh their memory about the programme and the disease.
- 5.4.2 For the second session, a TB specialist may be invited. He must be briefed on the coverage of the subject expected as under:
Latest developments in the diagnosis, preventive and curative aspects of TB. He must highlight the role of the M.O. in these activities.
- 5.4.3 The trainer will steer the discussions.

MODULE 5.5 National Programme for Prevention of Visual Impairment and Control of Blindness (NPCB)

PREAMBLE

The estimated number of blind persons in India is about 9 million people. In addition, 45 million people are said to be visually handicapped. These figures relate to those with visual activity of 6/60 or less. The prevalence of blindness in India is estimated to be 1.5 percent for the whole country, and in some states (e.g. Orissa) is as high as 3.6 percent. Most of the causes of blindness are preventable.

The M.O. therefore has to play an important role in educating the community about eye care, in supervising his workers and in the management of ophthalmic problems.

OBJECTIVES

The M.O. should be able to:-

1. Describe the National Programme for Prevention of Visual Impairment and Control of Blindness.
2. Diagnose and take preventive and curative measures against blindness.
3. Supervise and guide his workers in their responsibilities in the National Programme.
4. Educate and involve the community in preventive and control measures.

Duration: 1 hour

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	a) - National Programme for prevention	Review by	Handout 5.5.1

<i>Contents</i>		<i>Methods</i>	<i>Aids</i>
	of Visual Impairment & control of Blindness. — Causes — Strategy — Goal — Plan of Action	participants	
b)	Trachoma	Review	Handout 5.5.2
c)	Vit. A deficiency	Review	
2.	M.O.'s role in the Blindness Control Programme a) Early detection of cases and confirmation of diagnosis b) Treatment and follow-up of cases	Clinical Session/ Lecture discussion	Patients/slides/ charts
3.	a) Supervision of workers in their responsibilities in the Programme b) Education and involvement of the community in preventive and curative aspects.	Group discussion and presentation of reports	

TEACHING ACTIVITIES

		Time
1.	Handout 5.5.1 and 5.5.2 will be give to the participants a day before the session for review. (see Trainer Notes 5.5.1)	—
2.	Causes, diagnosis, preventive and curative aspects of blindness in India. This Session will be taken by a specialist either in the clinic or in the classroom. (see Trainer Notes 5.5.2).	30 min.
3.	The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and solutions (see Trainer Notes 5.5.3).	15 min.
4.	The participants will reassemble and each group will present important points from their discussion. These will be discussed by the class as a whole. (see Trainer Notes 5.5.4).	15 min.

TRAINER NOTES

- 5.5.1 Handouts 5.5.1 and 5.5.2 will be distributed to the participants a day before the session. The participants will review the material and refresh their memory about the Programme, Trachoma, ocular manifestations due to Vit A deficiency etc.
- 5.5.2 The second session will be taken by a ophthalmologist preferably in the clinic. Patients suffering from various blinding diseases will be demonstrated. Discussions will focus on the M.O.'s role on the early detection, confirmation of diagnosis and management of these patients.

- 5.5.3. The participants will be divided into 2 groups. Each group will discuss one topic. Emphasis will be on problems and solutions. The trainer will steer the group away from discussing methodology and treatment.
- 5.5.4 The participants will reassemble and each group will present important points of discussion. More time should be spent on discussion, rather than on presentation of reports.

MODULE 5.6	National Diarrhoeal Diseases Control Programme
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PREAMBLE

During 1980-81, the strategy of cholera control underwent a change consequent to the introduction of oral rehydration therapy on a massive scale. The strategy of oral rehydration therapy has proved effective not only in the treatment of cholera but all diarrhoeal diseases. Consequently, the cholera control programme was changed to the National Diarrhoeal Diseases Control Programme.

The M.O. (PHC) has an important role to play in the control of diarrhoea through education of the community and guidance to his workers.

OBJECTIVES

The medical officer should be able to:-

1. Describe the National Diarrhoeal Diseases control programme—its short and long term objectives and its plan of action.
2. Describe the signs and symptoms of mild, moderate and severe dehydration and its management.
3. Describe M.O.'s role in the management of diarrhoea and dehydration.
 - a) prevention and curative treatment
 - b) supervision of workers
 - c) health education of the community.

Duration: 1 hour

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	National Diarrhoeal Diseases Control Programme—Short and long term objectives.	Review	Handout 5.6.1
2.	Composition and preparation of <ol style="list-style-type: none"> (i) ORS at home (ii) ORS with packet (iii) Composition of ORS packet 	Review	Handout 5.6.2

Contents	Methods	Aids
3. Signs of dehydration and treatment	Review	Handout 5.6.3
4. Role of M.O. (PHC) in the management of diarrhoea and dehydration		
a) Preventive and curative treatment	Lecture discussion	Slides on dehydration as required
b) Supervision of workers		
c) Health education of community		

TEACHING ACTIVITIES

- Handout 5.6.1, 5.6.2 and 5.6.3 regarding (a) National Diarrhoeal Diseases Control Programme, (b) Oral Rehydration Therapy (c) Signs of dehydration and Treatment and Diagnosis of Dehydration to be distributed to the participants a day before the session for review (see Trainer Note 5.6.1). —
- This session will be taken by a Preventive and Social Medicine Specialist. He will deal with M.O.'s role in the management of diarrhoea and dehydration and discuss: 1 hour
 - Preventive and curative treatment.
 - Supervision of workers.

TRAINER NOTES

- The handout 5.6.1, 5.6.2 and 5.6.3 will be distributed to the participants a day before the session. The participants will read the handouts and refresh their memory about the programme and dehydration.
- A Preventive and Social Medicine Specialist should be invited to take the Session on Management of Diarrhoea and Dehydration for 45 minutes after which he should be requested to lead a general discussion for a further period of 15 minutes.

MODULE 5.7 The National Goitre Control Programme

PREAMBLE

Deficiency of iodine leads to goitre. When goitre occurs in a significant number of people in defined geographic area, it is known as endemic goitre. The states in the sub-Himalayan region and several districts in other states are endemically goitre prone.

Endemic goitre is a public health importance because it leads to such serious consequences as cretinism, deaf-muteness, mental retardation etc. among affected people.

If there is one disease which lends itself easily to total eradication within a generation or so, it is goitre: The medical officer must therefore take up this challenge to wipe out the disease in his community.

OBJECTIVES

The medical officer should be able to:-

1. Describe the objectives, components and problems of the National Goitre Control Programme.
2. Play his role in:
 - a) identification of goitre cases
 - b) supervision of his workers in their responsibilities
 - c) educate community about Goitre and its prevention.

Duration: 1 hour

(Group discussion classroom)

	<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1.	Objectives, components and problems of the National Goitre Control Programme.	Review by	Handout 5.7.1
2.	M.Os role	Group	
	a) identification of goitre cases	discussion	
	b) supervision of workers		
	c) education of community		

TEACHING ACTIVITIES

- | | | |
|----|---|---------|
| 1. | The Handout 5.7.1 will be distributed to the participants a day before the session for review (see Trainer Notes 5.7.1). | — |
| 2. | The participants will be divided into 3 groups. Each group will discuss one aspect of the M.Os role in the programme. (see Trainer Notes 5.7.2) | 45 min. |
| 3. | The participants will reassemble and each group will present important points from their discussion. These points will be discussed by the class as a whole. (see Trainer Notes 5.7.3). | 15 min. |

TRAINER NOTES

- 5.7.1 Handout 5.7.1 will be distributed to the participants a day before the session. The participants will review the material and refresh their memory about the programme and its problem.
- 5.7.2 In the second session, the participants will be divided into 3 groups. Each group will discuss one aspect of the M.O's role in the programme. The Trainer will steer the Group away from discussing methodology. Emphasis will be on problems and solutions.
- 5.7.3 The participants will reassemble and each group will present important points. More time should be spent on discussion rather than on presentation of group reports.

PREAMBLE

Sexually Transmitted diseases are a group of diseases which are clumped together due to the mode of transmission but the causative agents are different. Some of those diseases e.g. syphilis and gonorrhoea and chancroid or soft sore are reported to be fairly widely prevalent in India while Lymphogranuloma Venereum (LGV) is more prevalent in the southern states of Tamil Nadu and Andhra Pradesh and Granuloma Inguinale or Donovanosis is endemic in Tamil Nadu, Andhra Pradesh, Orissa, Karnatka and Maharashtra.

It is therefore, important that the M.O. (PHC) is trained in the management of these diseases.

OBJECTIVES:

The Medical Officer should be able to:-

1. Describe the sexually Transmitted Diseases Control Programme.
2. Describe the epidemiological factors of sexually transmitted diseases.
3. Diagnose and treat cases of sexually transmitted diseases.
4. Supervise his workers in their responsibilities in this programme.
5. Organise health education activities with regard to STD at subcentres.

Duration: 1 hour

Contents	Methods	Aids
1. Sexually Transmitted Diseases Control Programme	Review	Handout 5.8.1
2. Epidemiological factors of sexually Transmitted Diseases including AIDS	Review	Handout 5.8.2 Handout 5.8.3
3. Diagnosis of various STDs; importance of contact tracing; VDRL for prenatals; treatment of STD.	Clinical/ Lecture Session	V.D. Patients or slides
4. Supervision of workers in their responsibilities in STD Programme	Group Discussion	
5. Health education of (a) patients regarding early and complete treatment of STD (b) community regarding prevention of STD.	Group Discussion	

TEACHING ACTIVITIES

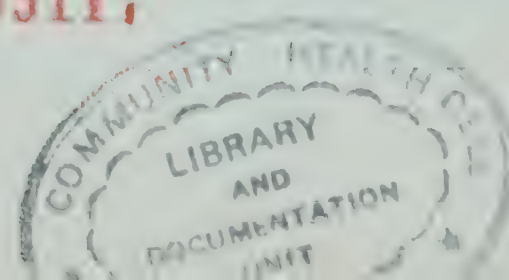
Time

1. Handout 5.8.1, 5.8.2 and 5.8.3 to be distributed to participants a day before the session. (Refer Trainer Notes 5.8.1) —
2. A clinical session by a specialist should be arranged for diagnosis; importance of contact tracing; VDRL for antenatals; treatment of STD patients. (Refer Trainer Notes 5.8.2) 1 hour

TRAINER NOTES

- 5.8.1 Sexually Transmitted Diseases Control Programme (Handout 5.8.1) and Epidemiological factors of Sexually Transmitted Diseases (Handout 5.8.2) and handout on AIDS (5.8.3) will be distributed to the participants a day before the session to review and to refresh their memory.
- 5.8.2 A Specialist will take the session preferably in the Clinic. The trainer will brief the Specialist on emphasising the role of the M.O. in
- (i) diagnosis, contact tracing, VDRL Test and treatment of STD patients.
 - (ii) early diagnosis and referral of AIDS patient.

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6.0 TRAINING

MODULE 6.1

Management of Training Programme at PHC

PREAMBLE

The M.O. (PHC) has the responsibility and has been organising training programmes, including continuing education, for various categories of health personnel i.e. health workers and health assistants under the guidance of district health authorities and Health and Family Welfare Training Centres, teachers under the School Health Service Scheme, train the Health Guides and arrange for the training of indigenous Dais with the assistance of Health Assistants and Health Workers Female.

In his orientation Training Programme, he has already been trained in training methodology.

In this continuing Education programme therefore he will be trained to manage his training programmes more efficiently and will be helped to find solutions to some problems faced in the training situation.

OBJECTIVES

The participants should be able to:-

1. List the training programmes held at PHC level and the resources available for the purpose.
2. Use a checklist for organising and managing training programmes.
3. Find solutions to problems faced in the training situation.

Duration: 2 hours

<i>Contents</i>	<i>Methods</i>	<i>Aids</i>
1. Training programmes at PHC level		
2. Check list for organising and managing a training programme.	Review	Handout 6.1.1
3. Problems faced in the Training Situation and solution to these problems. a) Managerial problems. b) Technical problems. c) Field problems.	Group Discussion	—

TEACHING ACTIVITIES

Time

- | | | |
|----|---|--------|
| 1. | The participants will come prepared with a list of training programmes conducted at PHC level as per format in Handout 6.1.1 given out a day before the session. | — |
| 2. | The participant will be distributed Handout 6.2. for review. | — |
| 3. | Group discussion in 3 groups on problems faced in organising and manager a training programme according to the check list (Handout 6.2) distributed the day before. | 1 hour |
| 4. | Reports of groups will be presented and discussed | 1 hour |

TRAINER NOTES

1. A day before the session, the Trainer will ask the participants to prepare a list of training programmes organised at the PHC level and bring the list with them.
2. He will distribute Handout 6.1 a day before the session and ask them to note down problems faced by them in the activities in the Handout.
3. The participants will be divided into 3 groups and each group will discuss the problems and final solutions.
4. One group will be asked to present their report and problems and solutions will be written down on the blackboard. The other groups will mention only additional problems.

7.0 MEDICO-LEGAL PROBLEMS

MODULE 7.1

Medical-legal Problems

PREAMBLE

The M.O. (PHC) has to face a number of medical legal problems e.g. injuries of all types, sexual offences and intoxication, poisonings etc. in his daily work. He must therefore be adequately trained for the purpose.

OBJECTIVES

The M.O. should be able to improve his performance in medical legal cases at the PHC.

Duration: 2 hours (Classroom)

Contents	Methods	Media
1. Duties of M.O. (PHC) in medico-legal aspects of a) Injuries Accidents etc. b) Sexual offences c) Intoxications, poisoning etc.	Lecture discussion 2 sessions of 1 hour each	

TEACHING ACTIVITIES

- | | | |
|-----|---|-----------------|
| 7.1 | The participants will be distributed the resume of session's prepared by the Forensic Medicine specialist a day before the session.
The specialist will take two sessions of one hour and each on duties of the M.O. in various types of medico-legal cases. The participants will be given half an hour at the end of the two sessions for solving problems of the M.O. regarding medico-legal cases. | Time
2 hours |
|-----|---|-----------------|

TRAINER NOTES

- 7.1 The Trainer will brief the Forensic Medicine specialist about the session, and request him to give a resume of his talk to be distributed to the participants a day before the session. The specialist will emphasise the duties of the M.O. in the handling of medico-legal cases. He will take two sessions totalling one and a half hour and leave half an hour for discussion and solving problems of the participants.

8.0 DEVELOPMENTS IN THE MANAGEMENT OF HEALTH PROBLEMS AND EMERGENCIES

Composite Series
MODULE 8.0

Latest Development in the Management of Health Problems
and Emergencies

PREAMBLE

The M.O. (PHC) has to be provided knowledge about the latest developments in the field of medicine, so that he is up to date so far as his clinical effectiveness is concerned. It is necessary therefore, that he gets an opportunity to learn from and interact with specialist teachers in various fields of medical knowledge.

OBJECTIVES

The M.O. should be able to:-

1. Diagnose and manage health problems and emergencies at PHC and
2. Update his knowledge about antibiotics.

Duration: Grand total 28 hours

Module	Contents	Methods	Media	Time	
				Hour	Min.
8.1. Medicine					
8.1.1	Resuscitation	Lecture demonstration	Slides/Charts	1	—
8.1.2	Chest pain	Clinical	Patients	1	—
8.1.3	Cardiac arrest	Lecture discussion	Slides	1	—
8.1.4	Syncope	Clinical	Patients		30
8.1.5	Shock	Clinical	Patients		30
8.1.6	Epilepsy	Lecture discussion	Slides/Charts	1	—
8.1.7	Meningitis	Clinical	Patients	1	—
8.1.8	Cerebral Malaria	Lecture discussion	Slides/Charts	1	—
Series Total				7	—

<i>Module</i>	<i>Contents</i>	<i>Methods</i>	<i>Media</i>	<i>Time</i>	
8.2	Paediatrics				
8.2.1	Neurological emergencies in children	Clinical	Patients		30
8.2.2	Respiratory problems in children	Clinical	Patients		30
8.2.3	Hyperpyrexia				30
8.2.4	Poisons				30
			Series Total	2	—
8.3	Surgery				
8.3.1	Accute Abdomen	Clinical	Patients	1	30
8.3.2	Head Injury	Clinical	Patients	1	30
8.3.3	Acute retention of urine	Lecture discussion	—	1	30
8.3.4	Fractures basic principles of management	Clinical	Patients	1	30
8.3.5	Burns	Clinical	Patients	1	—
			Series Total	7	—
8.4	Obstetrics and Gynaecology				
8.4.1	Bleeding per vaginum	Lecture discussion	Slides	1	30
8.4.2	Abnormal labour	Lecture discussion	Slides/Charts	1	30
8.4.3	Fertility Control—latest developments	Lecture discussion	Slides	1	—

<i>Module</i>	<i>Contents</i>	<i>Methods</i>	<i>Media</i>	<i>Time</i>	
8.4.4	Medical Termination of Pregnancy	Clinical	Patients	1	—
8.4.5	Antenatal and postnatal emergencies			2	—
Series Total				7	—
8.5	Ophthalmology				
8.5.1	Acute Red eyes	Clinical	Patients		30
8.5.2	Injury				30
Series Total				1	—
8.6	Ear, Nose, Throat				
8.6.1	Discharging ear	Clinical	Patients		30
8.6.2	Severe epistaxis	Clinical	Patients		30
8.6.3	Foreign body in the throat	Clinical	Patients		30
8.6.4	Stridor				30
Series Total				2	—
8.7	Antibiotics				
8.7.1	Antibiotics latest	Lecture discussion		1	—
Series Total				1	—
8.8	Mental Health	Major Problems	Lecture discussion	Series Total	1 —
Grand Total				28	—

TRAINER NOTES

- 8.1 For all lecture discussion/demonstration the Trainer will brief the specialist that the session is for M.Os. in the PHC. The specialist should tell them about the latest developments in the subject and the presentation should be for 30 minutes and time may be left for participants to ask questions and get their doubts cleared. He may be also requested to give a brief resume of his presentation so that it could be distributed to the participants before/after the session.
- 8.2 For all clinical sessions the Trainer will brief the specialist about the objectives of the course and that the session is for M.Os(PHCs). He may request the specialist to demonstrate latest practices on ward patients. Wherever possible, participants should be given the opportunity to practise what has been demonstrated.

PART II HANDOUTS

HANDOUT 1.1.1 Primary Health Care

The term "Primary health care" was first used to mean the care given to the patient by the health worker who saw him first. It was also called 'first contact care'. If the patient was referred to hospital, it was called "secondary care". More recently, the Alma Ata conference in 1978 gave primary health care a wider meaning as follows:—

"Primary health care is essential health care made universally accessible to individuals and acceptable to them, through their full participation and at a cost that the community and country can afford".

The concept of primary health care has been accepted by all countries as the key to the attainment of Health for All by 2000 A.D. It has been accepted as an integral part of the country's health system. It includes the following elements:

- a) promotion of food supplies and proper nutrition.
- b) education about health problems and their control.
- c) safe water supply and basic sanitation.
- d) mother and child health and family planning.
- e) immunisation against infectious diseases and injuries.
- f) prevention and control of locally endemic diseases.
- g) treatment of common diseases and injuries.

Principles underlying Primary Health Care

It is based on four principles

Equitable Distribution

Health services should be available to all sections of society with special attention to the needy and vulnerable groups. Primary health care aims at correcting urban-rural imbalances and bringing health services as near people's homes as possible. It should be supported by a higher level of health care to which the patient can be referred.

Community Participation

The involvement of individuals, families and communities in promotion of their own health and welfare, including self care, is an essential ingredient of primary health care. The community should participate in the planning, implementation and maintenance of health services.

Multisectoral approach

One of the basic tenets of primary health care is that full health cannot be provided by the health sector alone. It requires the joint efforts of the health sector and other health-related sectors viz education, food, agriculture, social welfare, housing and public works, rural reconstruction, etc.

Appropriate technology

This does not mean cheap, primitive technology for the poor. It calls instead for scientifically sound materials and methods that are socially acceptable, directed against relevant health problems. The examples are domiciliary treatment as against sanatorium treatment for TB patients, oral rehydration therapy in cholera and other diarrhoeal diseases, etc.

Health for All

In 1977, it was decided in the Health Assembly of WHO to launch the movement known as "Health for All by the year 2000 A.D.". In 1978 the Alma Ata Conference reaffirmed 'Health for All' as the major social goal of Governments. In 1981, the global strategy for 'Health for All' was adopted by WHO, which was later endorsed by the UN General Assembly. 'Health for All' has been defined as attainment of "a level of health that will enable every individual to lead a socially and economically productive life".

The declaration of Alma Ata stated that the best way to achieve the goal of Health for All is by providing primary health care, especially to the vast majority of under-served rural people and urban poor. It was left to each Government to decide how it should be provided in a manner appropriate to the people's needs.

National Health Policy (1983)

The National Health Policy was adopted by parliament in 1983. This policy document deals with the urgent problems requiring attention, the progress achieved so far, the existing picture and what is required to be done. It has also provided specific indications for the achievement of certain basic health and family welfare goals. They are shown in Table 1.1.1.

TABLE 1.1.1
Selection Indicators/Targets of Health for All by 2000 A.D.

Index	Present Level	Target		
		1985	1990	2000
1. Infant mortality rate	105 (1982)	106	87	Below 60
2. Perinatal mortality rate	55.7 (1980)	—	—	30 — 35
3. Crude death rate	11.9 (1982)	12	10.4	9.0
4. Pre-school child mortality	24 (1976-77)	20-24	15-20	10.0
5. Maternal Mortality Rate	4.8 (1976)	3.4	2.3	Below 2.0
6. Life expectancy Males	54.1 (1980)	55.1	57.6	64
Females	54.7 (1980)	54.3	57.1	64
7. Crude birth rate	33.8 (1982)	29.5	27.0	21.0
8. Net reproduction rate	1.51 (1980-81)	1.34	1.17	1.0
9. Growth rate	1.91 (1978)	1.79	1.66	1.20
10. Family size	4.3 (1979)	3.8		2.3

HANDOUT 1.1.2 Seventh Plan (1985-90)

In the overall health development programme, emphasis will be laid on preventive and promotive aspects and on organising effective and efficient health services, which are comprehensive in nature, easily and widely available, freely accessible and generally affordable by the people. Towards this objective the major thrusts will be in the following areas:

- i. The Minimum Needs Programme would continue to be the sheet anchor for the promotion of primary health measures. These will be backed up by adequately strengthened infrastructural facilities.
- ii. Inter-sectoral coordination – serious efforts for coupling health and health related services and activities e.g. nutrition, safe drinking water, supply and sanitation, housing, information, education and communication and social welfare, will be made as a package for achieving Health for All by 2000 A.D.
- iii. Community participation and people's involvement in the programme will be encouraged. Active participation of voluntary organisations and monitoring of a massive health education movement would be accorded priority.
- iv. Qualitative improvements are required supplies and logistics require greater attention; education and training programmes need to be more need-based and community oriented, and since management and supervision are vulnerable areas, management information system needs to be developed. Adequate provision of essential drugs, vaccines and sera need serious attention.
- v. Urban health services, school health services and mental and dental health services also need special efforts.
- vi. For the control and eradication of communicable diseases, programme implementation at all levels needs to be strengthened.
- vii. Cancer, Coronary heart diseases, hypertension, diabetes, traffic and other accidents are emerging as major health problems. Specialities and super-specialities need to be developed.
- viii. Training and education of doctors and paramedical personnel need a thorough overhaul. Medical training must be need based, problem centred and community-oriented. Continuing education is essential. Health management experience and expertise for all categories of health related managerial jobs will have to be ensured.
- ix. Medical research of special relevance to the common health problems of the people would be pursued. Evaluation of intervention and technologies will be given greater emphasis and priority. Modern biology and biotechnology will receive special attention. Immunological approaches to fertility control operational research and utilisation of computers will be pursued. There is urgent need for developing an efficient management information system (MIS).
- x. Teaching training, research and service activities in the development of the Indian system of medicine need to be pursued.

Programme Thrusts in the Seventh Five Year Plan

1. Rural Health Programmes:— The approach and strategy for developing health care delivery system in the rural areas initiated in the Sixth Plan would be pursued.
 - i. Consolidation of health infrastructure by making up deficiencies in respect of trained personnel, equipment and other physical facilities.
 - ii. The three-tier system of sub-centres, primary health centres (PHC) and community health centres (CHC) would be strengthened by converting the existing MCH centres and rural dispensaries into PHCs and sub-district hospitals into CHCs.
 - iii. The multipurpose workers (MPW) scheme would be extended, with emphasis on training, for ensuring attitudinal changes and developing required skills.
 - iv. Effort would be made for complete integration of the organisational set-up under health, family welfare and MCH programmes.
 - v. Community participants will be encouraged. Village Health Committees need to be activated. Participation by voluntary organisations would be promoted.
 - vi. The State Sector Minimum Needs Programme would be further strengthened by some ongoing and some new programmes as follows:—
 - a) Village Health Guides Scheme
 - b) Establishment of Sub-centres
 - c) Basic training of paramedicals and para professionals for rural areas
 - d) Augmentation of laboratory services
 - e) Orientation — training, integrated health management information system, supply of manuals, kit and educational material will be augmented.

Health care services in Urban Areas

There is urgent need for a coordinated, organised, integrated urban development programme which would include proper health services

- i. Network of hospitals needs to be strengthened towards the objective of one hospital bed for every 1000 population.
- ii. Administrative steps will be taken to curb the tendency to divert health personnel from rural areas and to deploy them in urban areas.
- iii. Organisation of family welfare and primary health care in urban areas to be brought under the supervision of medical colleges in collaboration with the local health authority.
- iv. Voluntary organisations and local bodies to be encouraged to undertake family welfare and primary health care service in a more systematic manner.
- v. District hospitals to be provided with specialised services in important branches including diagnostic services.
- vi. Efforts to be made to ensure that 40 per cent of all beds are for children and mothers.
- vii. Strengthening of institutions providing specialised services, so that they could be declared as referral institutions.

HANDOUT 1.1.3 Health Services Organisation

The country is divided into 23 States and 8 Union Territories, which in turn are divided into administrative districts. At present there are 431 districts, each divided into sub-districts or talukas, under which are situated the community development (C.D.) Blocks. There are about 6000 C.D. Blocks in the country.

Health care facilities and health services infrastructure have expanded considerably.

Village Level

There will be one Health Guide and one dai or Traditional Birth Attendant (TBA) for every 1000 population. Both of them will be selected from the community. They will be trained at PHC and sub-centres and will get technical support from the health workers, male and female, posted at the sub-centres.

Sub-centre level

The most peripheral health institutional facility will be the sub-centre, manned by one male and one female multipurpose worker. It is planned to have one sub-centre for 5,000 population, by the end of the Seventh Plan (1990) though at present it is for 10,000 population.

PHC level

It is envisaged that by 1990, one PHC will cover a population of 30,000 though at present, it covers a population of 1,00,000. Many rural dispensaries are being upgraded to subsidiary health centres or the new PHCs. Each new PHC will have one medical officer, one block extension educator (BEE) two health assistants (HAS) one male and one female, health worker and other supporting staff.

Community Health Centre

One community Health Centre (CHC) for every 1,20,000 population will provide all specialist services. This CHC will be an effective referral support to the PHCs and sub-centres. CHC will be established by upgrading sub-district/taluka hospitals and some of the Block level PHCs. For strengthening preventive and promotive aspects of health care a new non-medical post of community Health Officer (CHO) will be provided at each CHC.

District Level

District health organisation will carry out the planning, implementation and monitoring of health and family welfare programmes, and will also provide referral services to the periphery i.e. (PHCs, CHCs and taluka hospitals).

The primary contact care will be provided by the health functionaries at the village level and by the multipurpose workers at the sub-centre level. The cases needing further help will be dealt with at the PHC, and those needing referral support by the specialists would be referred to Community Health Centre (CHC). The secondary and tertiary referral support will be provided at the district hospital and medical college/specialised hospitals respectively.

State Level

a) The state Ministry of Health is headed by a Minister of Health and Family Welfare. The Health

Secretariat is the official organ of the State Ministry of Health and is headed by a secretary.

- b) State Health Directorate is headed by the Director of Health Services and he is the chief technical adviser to the State Government on all matters relating to medicine and public health. He is also responsible for the organisation and direction of all health activities.

The Centre

The official organs of the health systems at the national level consist of (1) The Union Ministry of Health and Family Welfare. It is headed by a Cabinet Minister, a Minister of State and a Deputy Health Minister. It has two departments: a) Department of Health and b) Department of Family Welfare.

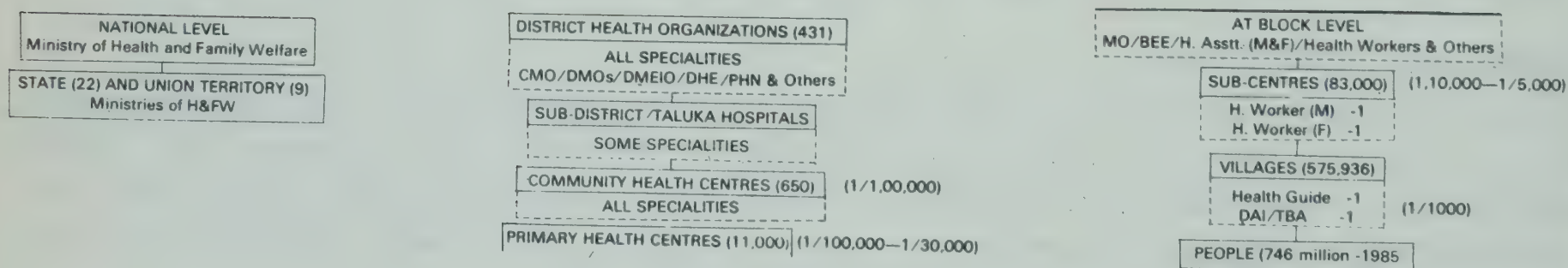
(2) The Directorate General of Health Services is the principal adviser to the Union Government in both medical and public health matters. Its functions are planning, coordination, programming and appraisal of all health matters in the country.

(3) The Central Council of Health has the following functions

- To recommend broad lines of policy.
- To make proposals for legislation.
- To make recommendations for distribution of grants-in-aid.
- To establish organisations for productive cooperation between the Central and State Health administrations.

Diagram 1.1.1 shows the organisation of health care services at various levels.

Table 2
HEALTH SYSTEM INFRASTRUCTURE



The health services organization in the country extending from the national level to a sub-centre level is diagrammatically represented in this table. Sub-centres constitute the most peripheral governmental health institutional facility. The village level health functionaries i.e. Health Guides and Trained *Dais* form the interface between the people and the governmental set up. The figures within the solid boxes represent the number of centres etc., whereas figures in parentheses outside the boxes on the right hand side represent the number of institutions in proportion to the population, which are currently available and which are aimed to be established by the year 1990. The type of the health and family welfare personnel that are available at different levels are given in the boxes marked by the dotted lines.

HANDOUT 2.1.1 Management

Almost everyone has some conception of the word 'Management' and is conscious, that management requires certain abilities which are distinct from those required to do the work. Thus a man may be a first-class doctor but may be unable to manage a large hospital successfully. This is common knowledge, and most people have seen or read about cases in which a business failed, not because its owner did not know his field, but because he was a poor manager. To cite one well known example, Thomas Edison was a superb inventor, but the company he established to manufacture electric light bulbs failed because Edison was a poor manager.

When a person becomes a manager, he may continue to do part of his former work, but more importantly he takes on new duties that are entirely managerial in character. He must lay out the work for others, decide which part of the total job each of the groups or individuals under him should do, establish priorities, induce subordinates to put forth their best efforts, and check on their progress.

Knowledge of the work will help a manager, but he will need something more. Even when he knows exactly how he would do the job himself, he may be unable to explain to others how it should be done or to decide how to divide the job in parts when several people are to do the job.

But if a manager needs more than knowledge of the work itself, what exactly does he need to know? Or is management an art that can be practised effectively only by those with a special natural talent for it?

There is general agreement that management is partly an art. No foolproof rules exist that do away with the need for judgement and common sense. Management and administration anyone may learn. And regardless of a person's natural talent for management, or lack of it, he will be a better manager because he has acquired this knowledge.

In order to determine what a manager should know, it is necessary to define management. Management is the purposeful and efficient use of resources as given earlier. Management comprises of one of the important elements of manpower resources, which requires proper management. In the process of managing personnel the manager must not only understand how to get people to do what he wants them to do; he must also know what they should be doing, what results should be achieved, what each person or group should contribute to the common effort, and how the result can best be achieved without duplication of work or wastage of resources. The medical officer's job is essentially resource management, planning, coordination, evaluation and supervision.

Again, management involves decision-making and it is quite true that many of the most important actions managers take are simple decisions. And the manager has to get things done through other people. Then, the manager must decide first of all what he wants the people to do; then he must decide who can best do each part of the job and how he can ensure that each person does a good job. If the study of management is to foster better decision-making, the management job must be

broken down into functional areas that will make it possible to clearly see what knowledge and skills the modern manager needs. Six of these functional areas are described below:

Managment Functions

Planning: The manager first outlines the job he wants to be done. He must set short and long-term objectives for the organisation and decide on the means that will be used to achieve them. For this it is necessary for him to forecast, as much as he is able, the economic, social and political environment in which his organisation will be operating, and the resources it will have for the programmes. For example, some plans may be feasible only in times of prosperity and may be utterly impractical in a period of resource constraints.

Organising: The manager must carry out the plan by organising resources – personnel supplies, transport, finances, etc. He must establish operating procedures and reporting relationships. The work done by subordinates will necessarily be interrelated; hence, some means of coordinating their efforts must be provided. Coordination is, in fact, an essential part of organising.

Staffing: Having known the work to be done, he must find the right person for each job. An established health service, of course, already has people filling the staff positions. However, staffing obviously cannot be done once and for all, since people are resigning being promoted, and retiring. Furthermore, worker's skills change with acquiring more experience, or getting additional training. So a management must make periodical assessment of his staff and attempt to plan each person into the position where he can do the best job.

Direction: Since problems and opportunities in the day-to-day work cannot be anticipated beforehand, job descriptions must be stated in general terms. The manager, while providing day-to-day direction to his subordinates, must make sure that they know the results he expects in each situation, help them to improve their skills, and, in some cases, tell exactly how and when to perform certain tasks. A good manager makes his subordinates feel that they want to do best possible job, not merely work well enough to get by.

Coordination: The manager has to inter-relate the various activities contributing to the achievement of an objective. This is an important function of management to blend all the activities into a unified action.

Reporting: The manager has to report the progress to his superiors regularly. The progress needs to be assessed from records and reports, which will also be useful for monitoring and evaluation.

Budgeting: The manager has to prepare a budget, and monitor expenditure. At the end of the year he has to assess the financial performance.

Control: A control mechanism helps the manager to determine how well the jobs have been done and what progress is being made towards the goals. He must therefore know what is happening so that he can step in and make changes if the organisation is deviating from the path he has set for it. A mechanisms of control is for systematically judging progress towards goals.

Innovation: A good manager is always an innovator. Peter Drucker, an important pioneer in modern management, has said, 'Managing a business cannot be a bureaucratic and administrative job... (it) must be a creative task.' A manager may innovate in several ways, for example, he may develop new ideas himself, combine old ideas into new ones, pick up ideas from other fields and adapt them to his own use, or merely act as a catalyst and stimulate others to develop and carry out innovations.

HANDOUT 2.1.2 Job Description of Medical Officer, Primary Health Centre

General

The medical officer of primary health centre is responsible for providing direction and guidance in all the health activities radiating from his health centre. He should therefore, keep himself fully conversant with the area, village, topography, demography, community health needs and public health problems. Being the custodian of health of the area he will undertake promotive, preventive and curative work in an integrated manner. For this purpose, the medical officers in the primary health centre will divide the area amongst themselves on a geographical basis and will be responsible for all the health programmes in their respective areas. It is aimed that ultimately the PHC will cover a population of 30,000 with one medical officer. The situation may then change.

A. Curative work

1. The medical officer will organise the dispensary, out-patient department and in-patient wards and will allot duties to ensure smooth running of the same.
2. He will make arrangement for distribution of work in the treatment of emergency cases which come outside the normal OPD hours.
3. He will organize laboratory services for proper diagnosis of doubtful cases.
4. He will make arrangements for rendering services for the treatment of minor ailments at community level and at the PHC through the agency of health assistants, health workers and health guides, and trained dais.
5. He will attend to cases referred to him by health assistants, health workers, health guides and trained dais.
6. He will screen cases needing specialised medical attention and nursing care and refer them to referral institutions.
7. He will provide guidance to the health assistants, health workers, and health guides in the treatment of minor ailments.
8. He will cooperate and/or coordinate with other institutions providing health services in the Block.

B. Preventive work

1. He will ensure that health assistants, health workers, health guides and trained dais are fully conversant with the health programmes to be implemented in the villages where they work.

2. He will supervise their work regularly, both in the clinics and in the community setting, and will give them necessary guidance and direction.
3. He will visit each sub-centre in this area at least once in a week on a fixed day not only to check the work of the staff but also to provide services and on-the-spot guidance to health assistants, health workers, health guides and trained dais.
4. During the field visits he will provide technical guidance to health guides and encourage them to participate in promotive and preventive health activities.
5. He will visit schools in his area at least once in a year for medical check-up, immunization, and health education. He will also make arrangements for the treatment of those students found with defects.
6. He will carry out MCH services and will actively involve health assistants, health workers, health guides and trained dais in the effective implementation of MCH, family planning and nutrition programmes.
7. He will ensure that all steps are being taken for the control of communicable diseases and proper improvement of sanitation in the villages.
8. He will take necessary action in case of any outbreak of epidemic in his area.

C. Promotive work

1. He will organise/participate in village health committee/village panchayat meeting to discuss health programmes with the public and enlist their cooperation.
2. He will keep close liaison with the block development officer and his staff, community leaders and various social welfare agencies in his area and involve them to the best advantage in the promotion of health programmes.
3. He will organize camps, meetings, health education talks and demonstration, display of poster, exhibitions and films with the assistance of the block extension educator, health assistants and health workers.
4. Wherever possible, he will conduct field surveys to identify local health problems, and then, based on these health problems he will devise a strategy for effective delivery of health services in his area.

D. Training

1. He will organize training programmes, including continuing education, with the assistance of the block extension educator and under the guidance of the district health authorities and Health and Family Welfare Training Centres (HFWTCs) under the multipurpose worker scheme.
2. He will educate the community as to the selection of health guides and will take necessary steps to train health guides from his area.
3. He will also provide assistance to the health assistants (F) and health workers (F) in organizing training programmes for indigenous dais practising in the area.

E. Administrative

1. He will supervise the work of staff working under him.

2. He will ensure general cleanliness inside and outside primary health centre and also proper maintenance of all the equipments under his charge.
3. He will keep the inventory and stock register of all the stores and equipments supplied to him up-to-date and will be responsible for its correct accounting.
4. He will prepare indents for drugs, instruments, linen, etc. sufficiently in advance and will submit them to the appropriate health authorities.
5. He will scrutinize the programmes of his staff and suggest changes if necessary, to suit the priority of work.
6. He will ensure the proper maintenance of vehicles under his charge.
7. He will prepare and display charts in his office to explain clearly the geographical area, location of peripheral health units, morbidity and mortality, health statistics and other important information about his area.
8. He will hold monthly staff meetings with his staff for evaluating the progress of work and suggesting steps to be taken for further improvements.
9. He will ensure the regular supply of medicines to health guides and disbursement of honorarium to trained dais.
10. He will maintain the prescribed records at the PHC level.
11. He will receive reports from the periphery, get them compiled and submit the returns regularly to the district health authorities.
12. He will keep notes of the field visits he makes in his area and submit every month his tour reports to the CMO.
13. He will discharge all the financial duties entrusted to him.
14. He will discharge the day-to-day administrative functions pertaining to the primary health centre.

HANDOUT 2.5.1 Supervisory Checklist

The goal of a supervisor is to ensure that their subordinates provide the prescribed level of primary health care services. To achieve this goal medical officer must systematically and regularly monitor their activities and performance.

Using Checklist to Monitor Performance of Workers

A checklist is a tool to help supervisors systematically monitor the health service being provided by subordinates. It contains a list of important programme activities as well as performance standards for health personnel. The supervisor should be checking this information regularly to ensure that health personnel are providing high quality health services. The information on the checklist is determined by the programme activities and by the skills being performed by health personnel. The items on the checklist are usually grouped and arranged in a logical order, so that the checklist is easy to use.

A checklist should be neither too long nor too short. A checklist that is long and detailed will be

cumbersome to use. If the checklist is too short, it will not give you enough guidance when you are making supervisory visit. When you develop your own checklist, include enough details to serve as a guide but not too many to make the list too difficult to use.

Format for Checklist

A sample format for checklist is shown below. Activities skills and data to be monitored are listed in the left hand column. The supervisor writes notes on the observations, assessments, recommendations, or action taken in the right hand column. Each entry should be dated.

Activities, Skills and Data to be Monitored	Notes		
	Date:	Date:	Date:
1.			
2.			
3.			
4.			

This is only a sample format. You may have one to suit your need. Use your format when you develop your own supervisory checklist.

HANDOUT 2.5.2 Illustrative Monthly Supervisory Checklist for Health Worker (Female)

Name_____Sub-centre_____

District_____

	Notes		
	Date:	Date:	Date:
1. Team Activities			
(i) Participation in staff meetings			
(ii) Coordination with HW(M), HGs and Dais			
(iii) Participate in camps and campaigns			
2. Record Keeping			
(i) Prepare, maintain and use records and reports			
(ii) Map and charts			
3. Primary Medical Care			
(i) Treatment of minor ailments			

- (ii) Referral to PHC
- 4. Family Welfare
 - (i) Use eligible couples register
 - (ii) Motivate people to accept contraceptive methods
 - (iii) Distribute contraceptives
 - (iv) Accompany acceptors to hospital
 - (v) Follow-up acceptors
 - (vi) Establish female depot holders
 - (vii) Promote family welfare services in the community
 - (viii) Identify women leaders and help to train them
 - (ix) Attend community meetings to promote contraception
 - (x) Identify and refer medical termination of pregnancy cases
- 5. Nutrition
 - (i) Identify malnutrition cases
 - (ii) Distribute vitamin and mineral supplements
 - (iii) Educate community on nutrition
- 6. Communicable Diseases
 - (i) Identify and report communicable diseases
 - (ii) Educate the community about notifiable diseases
- 7. Dais Training
 - (i) List dais in the area
 - (ii) Help train dais
- 8. MCH
 - (i) Register and care for pregnant women
 - (ii) Refer abnormal and difficult cases
 - (iii) Conduct deliveries
 - (iv) Supervise deliveries conducted by dais
 - (v) Make postnatal house visits
 - (vi) Monitor child growth and development
 - (vii) Assist in MCH clinics
 - (viii) Educate mothers about MCH topics
- 9. Immunisation
 - (i) Give immunisations
 - (ii) Immunise pregnant women with TT
 - (iii) Educate women about immunisation
- 10. Sub-centre Management
 - (i) Drugs and supplies

- (ii) Maintenance of equipment
- (iii) Logistics and communication
- (iv) Cleanliness of sub-centre
- (v) Work planning and scheduling
- (vi) Intersectoral coordination
- (vii) Community participation

HANDOUT 2.7.1 Leadership

A leader is a person who plans, organizes, makes decisions and influences people. He trains people, coordinates their work and motivates them to do their jobs well. A leader points the directions and others follow. They take an interest in people. Leaders are able to assess people's abilities and help people develop new skills.

Leaders are self-confident. They know their job and do it well. Therefore, they are not threatened by opinions that differ from their own. In fact, leaders welcome different opinions. They find it stimulating and helpful in seeing all sides of a problem.

Leaders have a positive attitude toward people and toward their work. They continue working despite setbacks and disappointments. Leaders are always hopeful; they expect their efforts to lead to success.

Leadership Styles

There is no single, correct way to be a leader. As a supervisor of a primary health centre, you must decide what leadership style should be used and when it should be used. You must know when to use an authoritarian approach, when to use a participative approach.

1. **Authoritarian Style of Leadership:** An authoritarian leader focuses only on the work to be done. He must plan the work and watch his staff closely while they are doing the work. He sets the objectives for the staff and then he pushes them to get their work done.
2. The authoritarian leader assumes that he should give orders and the staff should obey them. He takes his decisions as the best ones. He assumes most people dislike work and must be told what to do. He feels that he must plan their work in detail and tell them when to do it. He believes his own procedures and work methods are best and that his staff should follow his example.
3. **Participative Style of Leadership:** The leader of the participative or helping style wants his staff to participate in setting objectives for their work. He uses them for decisions, team planning and the team cooperation in getting work done. Consequently the staff take responsibility for the work and are committed to the work.

The participative leader trusts his staff's abilities. He listens to their opinions and encourages them to contribute their ideas how to provide better health services. He always helps them improve their skills. He gives them more responsibility as their skills improve. He spends much of his time with his staff. He works with them to solve problems at the PHC and in the community.

To the outsider, especially one who favours an authoritarian style, the participative leader looks as though he is not doing much work. He is always consulting with his staff and encouraging them in their work, but he does not do the work himself. He does not use firm control and authority to lead his staff. He encourages them to speak up, and to give their opinions. The participative style has three advantages. First, the staff will feel they belong to a team, and therefore, will work harder. Second the staff will be more motivated. They will accept decisions and carry out work with more commitment and enthusiasm. They will have self-confidence. Third, the quality of decisions will be improved because the ideas and experiences of the entire staff, rather than just that of the supervisor, will go into making decisions.

The participative style is particularly effective for supervising staff in rural areas. With direct contact limited to once a month or even less, the supervisor's goal ought to be to develop independent, self-reliant, and confident staff in the sub-centres who can work without close supervisions. In rural areas not enough direct contact between sub-centre staff and supervisors occurs to make a highly authoritarian style possible, even if it were desirable.

3. Laissez-faire Style of Leadership: The laissez-faire leader is not really a leader at all. He has no interest in how the work is done, or even if the work is done. He leaves it to his subordinates to plan and organise their work as they like. A laissez-faire leader does not show any interest in subordinates, and his only wish is that subordinates, and his only wish is that subordinates do not bother him with their questions or problems. A laissez-faire leader will often announce targets or objectives, but he does not plan how to achieve these targets, nor does he evaluate to see if the targets are being met.

A laissez-faire leader is a person who is reluctant to play the role of a leader, or who altogether refuses to play that role.

You should understand one final point about leadership styles. Supervisors tend to copy the leadership style of their supervisors. Large organisations such as government health departments often rely on an authoritarian style. Decisions are frequently made at State or district levels, and PHCs are encouraged to meet targets and follow the rules and regulations. Medical officers at PHCs tend to copy this authoritarian style, often, unconsciously, when dealing with their staff. Therefore, make a conscious effort to use a participative style, even though your own superiors may continue to use an authoritarian style with you.

HANDOUT 2.8.1.1

Questionnaire on Financial System

1. What are the sources of funds for the health services?
- a. _____

b. _____

c. _____

d. _____
2. Briefly explain your understanding of the budgeting process at district and State level.

District level _____

State level _____

3. Estimate what you think is the amount allocated in the 1985-86. State budget for;
- | | | |
|----|--|-----------|
| a. | Drug and supplies in your district | Rs. _____ |
| b. | Drugs and supplies at your PHC | Rs. _____ |
| c. | Personnel (Salaries, etc.) in your district. | Rs. _____ |
| d. | Personnel (Salaries etc.) at your PHC | Rs. _____ |
| e. | Total health budget for your State | Rs. _____ |
| f. | Total health budget for your district | Rs. _____ |
| g. | Total budget for your PHC . | Rs. _____ |

4. Do you have any problems with the imprest money at your PHC? If so, please explain.
- _____

5. Which officers at PHC are entitled to travel advances? What amount? Note any problems you are having with travel advances.
- _____

6. List all the forms, vouchers, receipts, records, registers, ledgers used in financial management at a Primary Health Centre.
- | | |
|----|-------|
| a. | _____ |
| b. | _____ |
| c. | _____ |
| d. | _____ |
| e. | _____ |
| f. | _____ |
| g. | _____ |
| h. | _____ |

Name _____

Intuitive Method: This method, aided by the well known 'want book', is the most common method in practice today, yet perhaps the least effective. Items are recorded in the want book when the number of units in stock reaches close to Zero. The amount ordered is then the best estimate to the store-keeper or worker in the field.

Perpetual Inventory Method: This is one of the most accurate and effective methods of inventory control. The maintenance of a perpetual inventory is, of course, an ideal situation if the recordkeeping can be kept up-to-date. In many small pharmacies, the person in charge of dispensing, at the end of each day, summarises all drugs issued and makes the proper posting in the perpetual inventory file. The file may consist of appropriate forms or preprinted cards.

ABC Method: This method is based on the fact that some stock items have a much higher annual usage value than others. Thus after doing a cost analysis, stock items are separated into three classes with following characteristics;

Class	Number of items	Rupees value of items
A	10 per cent of total items	70 per cent
B	20 per cent of total items	20 per cent
C	70 per cent of total items	10 per cent

Inventory control efforts are maximised on expensive items. For example, inventory level and consumption of class A items is minimised with the help of tight and close control (Frequent stock taking, secure storage, careful issuing procedures.) on the other hand, in the case of inexpensive C items control is comparatively relaxed, and an abundant buffer stock is maintained throughout the year because it is quite economical to carry these items.

VED Method (Vital, Essential, Desirable): In the VED method, each stock item is classified as either vital, essential or desirable based on how critical the item is for providing health services. The vital items are stocked in abundance; essential items are stocked in medium amounts; desirable items in small amounts. By stocking items in order of priority, vital and essential items are always in stock which means a minimum of disruption in the health services offered to the community.

Two-Bin Method: This method separates the stock of each item into two bins (Boxes). One bin contains the main stock; the second (smaller) bin contains enough stock to satisfy demand during the period necessary for replenishment. When the first bin is exhausted, an order for replenishment is immediately placed. In the meantime, stock in the second bin is used to satisfy demand until the replenishment stock arrives. Part of the new supply, when it arrives, is used to fill the second bin, which is again placed in reserve. The remainder of replenishment stock is placed in the first bin where it is available for issuing and use.

The Overall Frame:

India is committed to the twin goals of Health for All and the Net Reproduction Rate of Unity by the year 2000. The two goals are recognised to be intimately interwined and further, their achievement predicated on — and contributing to — the improvement of the condition of women and children. This, itself, is a specific Constitutional Directive which has been repeatedly repledged as a national priority. These four interlocking areas of concern provide the paradigm within which the communication thrust for promoting family welfare will be made.

While continually emphasising the broader parameters and locating the interconnections between these four key dimensions, focussed attention will be required on the specific elements that promote later marriages, parenthood by choice and with responsibility, and birth control as an empowering tool of the individual, as crucial values of a progressive society. In particular, the two-child norm which is presently far off the mark of popular perception of the small family (which is in the region of three-four) will have to be promoted, by building a critical understanding of the need for population stabilisation as a factor for stemming environmental decline and imbalances with life-sustaining and quality promoting resources.

The Immediate Goals:

In the short term, the goals of the Revised Family Welfare Programme to be implemented during the remaining three years of the Seventh Plan that the communication campaigns must assist to accomplish are:

- Raise mean age of marriage for women to over 20 years.
- Promote two-child family limit as preferred family size.
- Substantially increase demand for contraception to achieve a couple protection rate of over 42 percent of eligible couples — which includes inter-alia recruiting 31 million sterilisation acceptors, 21.2 million IUD acceptors* and 14.5 million CC and OP users* by 1990.
- Enhance child survival, with immunisation of 82 million infants and 90 million expectant mothers, the reaching of Oral Rehydration Therapy to 150 million households.
- Reach population education to all children in the age group and all adolescents in the 15-19 age group.
- Broad-base programme outreach by maximum involvement of non-governmental structures and increase utilisation of existing health services and facilities.

The Communication Thrust:

The spirit of the communication effort is to be non-prescriptive. It must respect the people's intelligence, not preach nor push through plain publicity and propagand to achieve desired

*Still higher targets are to be attempted

results. Rather a systematic, sustained effort of public information and education will be required. Its aim will be to help people know and understand the "Why and how" of what is proposed for their action. The people must be able to appreciate the logic of the national goals and actively perceive them as synchronising with and subserving their individual and family betterment, alongside recognising the individual's contribution to collective betterment. The communication must also help the people acquire the full information and support that enables them to arrive at and practise the requisite decisions in ways that are right in their own context.

Further, the information, education and communication aspects cannot be pursued in isolation, but must form an integral part of the programme action. This, in turn, will have to bring into place the support services that ensure the communication is credible, as also physically provide the opportunities to actualise the actions sought to be promoted, synchronising field action with communication.

With awareness levels already noted to be high and positive trends already existing on major programme objectives, the key communication task is now to bridge the lag between awareness and adoption at a pace that is fast enough to achieve an ambitious scale of operation within a short time frame. Unity of approach and synergetic action between mass media and inter-personal channels — that will constitute the more important half of the communication effort — is, therefore, of the utmost criticality.

The Communication Objectives:

1. To create a climate for values that promote responsible parenthood.
2. To accelerate the adoption of contraceptive practices, spacing and terminal, through creation of a more specific information base on range of choices, benefits and side-effects so as to enable rational, informed decision-making.
3. To promote increase in the age of marriage, particularly in the States of U.P., Bihar, Madhya Pradesh, Rajasthan and Andhra Pradesh.
4. To promote the status of women with a view to empower women as full partners and decision-makers in the family and community and to neutralise the preference for a male child.
5. To highlight male responsibility and increase male participation in family planning.
6. To contribute to improved child survival through promotion of immunisation, ORT and other child development services, but most particularly through child timing and child spacing to ensure safer births.
7. To contribute to improvements in women's reproductive health by increased acceptance of antenatal services, deliveries through trained personnel and telescoping of fertility as far as possible into women's twenties.
8. To create a widespread information base promoting primary health care, particularly MCH and family welfare, through self-reliance and greater utilisation of existing services and facilities.
9. To promote the two-child norm, particularly to the younger age groups as a personal and national ideal, inter-alia, creating an understanding of the linkages between expanding

population and declining environment/ecology and other finite resources.

10. To bring about a synergy of mass media and inter-personal channels through a careful synchronisation of messages and a back-up and reinforcement through the mass media.

Geographical Coverage:

All India but with special emphasis on Bihar, U.P., M.P. and Rajasthan.

Message Strategy:

To address the above objectives a series of multi-media campaigns will be devised drawing the best national talent. Each will centre around a single message theme. Each message theme will be expressed in media materials for mass and inter-personal channels. The broad message summarising the Family Welfare approach of the intensified campaign is:

'Marriage after 18, only
First Child after Twenty
At least Three years before the Second
After two children, preferably before Thirty years of age, Child-bearing Must End.

To address this composite message the following themes will be taken up in Special Multi-Media Campaigns:

Themes:

1. Values and lifestyles that build a base for responsible parenthood.
2. Delay in the Age of Marriage.
3. Safer Births, including MTP.
4. Pro-child : The Health, Happy Child.
5. Women's Status : Reproductive Health a Basic Right/A Girl or Boy, No Difference.
6. Male Responsibility.
7. Primary Health Care, Self Reliance and Greater Utilisation.
8. Birth Control—Choice not Chance.
9. Method Specific promotion—spacing.
10. Terminal methods.
11. Interface with and back-up to workers.
12. Mobilisation of the community.

Target Audiences:

- i) Rural
- ii) Urban Slum dwellers.

Primary: those below Rs. 500/ per month; illiterate and Semi-literate.

Secondary : Others

Segmentation of target audience, matched to themes, but overlapping and networking to be consciously structured.

Major Focus Groups: Within Target Audiences:

1. Children
Male/female 10–14
2. Young Unmarried
Male/female 15–19
3. All Married Couples
Male/female 15–44
 - But with Specific Grading the Segments:
 - i) No Children Couples;
 - ii) One Child Couples;
 - iii) Two Child Couples;
 - iv) Three or more than three Child Couples.
4. Elders particularly Community Leaders, Mother-in-Law, Opinion makers and influentials.

HANDOUT 3.2 Guidelines for preparation of Annual Action Plan of MEM Activities

In preparing Annual Action Plan the following may be kept in mind:—

- a) There should be a shift from paid publicity to wider mobilisation of resources of other Departments/Agencies in support of health and family welfare programmes. Buying of space and time for family welfare publicity should be eliminated or at least kept to the minimum. For putting up hoardings, bus boards, wall paintings, etc. no rental is to be paid. Effort should be made to involve Govt. Departments, local bodies, public sector undertakings, autonomous bodies, voluntary agencies etc. to provide space free of charge. There should be minimum reliance on press advertising. The local press should be persuaded to carry news and views through editorial support.
- b) The MEM activities should be so planned that they create informational and educational base and are persuasive rather than prescriptive.
- c) A time bound programme for equipping all districts and atleast 25 per cent of the Primary Health Centres in the State within a period of three months be included in the Action Plan. Preparation of software like slide sets, exhibition material for portable exhibition and transfer of selected programmes broadcast by local stations of AIR on to blank cassettes be included indicating the time frame for their completion.
- d) Short Orientation Training Programme for BEEs and other MEM functionaries in the use of A.V. Equipment, their maintenance and upkeep and to upgrade their skills in preparation of simple A.V. materials be worked out and included in the Annual Action Plan.
- e) Details of materials to be produced at the State Offset Press indicating the themes of such materials be given.

- f) Activities for mobilisation of public opinion in favour of family welfare may be conceived in the form of Seminars/Workshops of Opinion Leaders of various levels be worked out and included in the Plan.
- g) Specific activities should be indicated for formulation/energisation of women and youth forums.
- h) Activities indicating coordination and collaboration between the State Health Department and the State Departments/Agencies implementing Population Education Projects be included.
- i) There is a need to provide orientation to programme producers of local stations of All India Radio, Doordarshan Kendras, Song and Drama Units, Field Publicity Units, State Public Relations Departments and other media agencies to ensure that the main thrust areas of the communication strategy are adequately covered in their programmes. Activities proposed in this regard be included.
- j) In certain States Area Projects are in operation and funds for IEC Activities are available under the Project budgets. In preparation of the Annual Action Plan cognisance should be taken of availability of funds under Area Projects and Plan should be so developed that it complement and supplement the total Plan of activities for the State as a whole.
- k) In planning MEM activities and preparation of educational materials, the six campaign areas viz. raising age of marriage, spacing, child survival measures including immunisation and ORT, safer births, male responsibility and two child norm are fully covered.

HANDOUT 3.3 Revised Guidelines for Organising Family Welfare Opinion Leaders' Camps

Need and Importance

- 1.1 Family Planning being a basic postulate of Socio-economic development in the country, it has been given a key position in our national policy. It aims at total human resource development to bring out desirable improvement in the quality of life of the people. In order to ensure the full interaction among various aspects of quality of life, linkages have been established with all related sectors of Socio-economic development and as such, this programme has been integrated with the Primary Health Care delivery system with an accent on the concept of total family welfare.
- 1.2 In our National Health Policy, we have set for ourselves certain demographic goals by 2000 A.D. These are to bring down the birth rate to 21 per thousand, death rate to 9 per thousand and infant mortality rate to less than 60 per thousand live births. These goals call for increase in the percentage of effective utilisation of family planning methods from 32 to 60 by 2000 A.D. Net reproductive rate would be one and the process of population stabilisation would commence automatically.
- 1.3 The Strategy to achieve the long term goal of population stabilisation through the adoption of the small family norm is entirely on a voluntary basis. All out efforts to convert family planning into a mass movement – a programme of the people, by the people and for the people, are to be intensified. *For this purpose, close and voluntary*

involvement of various sections of society through opinion leaders of the community shall be absolutely essential.

- 1.4 In order to convert Family Planning Programme into a social movement, it is imperative to seek the cooperation and support of all the local leaders of villages, towns and cities. These local leaders have considerable influence in their communication and are familiar with the local dialects and communication channels. They are more effective than outsiders in motivating the people to accept the small family norm.
- 1.5 Family Welfare Opinion Leaders' camps provide an ideal opportunity to the community leaders to have a closer insight about the programme by having the broader view of the common welfare programme of their own planned family life. These camps will also generate the feeling of common understanding between the programme planners and the community and thereby it will be possible to ensure effective participation of the community in planning, organising, and implementation of the programme.

2. General Objectives

- 2.1 To secure over-all active support and cooperation of the opinion leaders of the area in motivational and educational efforts for the promotion of the Family Welfare Programme and to convert these leaders into agents of change.

3. Specific Objectives

- 3.1 To appraise the local leaders that the Family Welfare Programme is an integral part of the total package of welfare activities covering health, education, nutrition and family welfare and that its focus is on improving the quality of life of the people.
- 3.2 To enable the leaders to understand the implications of unplanned population growth and to appreciate the governmental efforts towards this direction.
- 3.3 To convince the local leaders that the family welfare programme is entirely a voluntary movement and that adoption of the small family norm will help them in improving the quality of life and standards of their living.
- 3.4 To enable the opinion leaders to develop correct understanding about contraceptive methods and to dispel misgiving, doubts and misconceptions about various aspects of family planning.
- 3.5 To enthuse opinion leaders about their roles and responsibilities in the promotion and development of Family Welfare Programme and to educate them how to motivate people to adopt the small family norm as a way of life.

4. Levels of camps

- 4.1 The opinion leaders' camps are to be organised from village level to the State Level. As regards the organisation of village level camps, necessary details will be discussed in the subsequent pages in a year one camp may be organised in every district and two opinion leaders may be selected from each Primary Health Centre area to participate in the district level camp. The selection may be made out of village panchayat pradhans/sarpanchas, members of Block Samitis, eminent social workers of the District and Opinion Leaders who attended village level camps and did good work in family welfare. About 40 such participants may be called in a district level camp. In these camps, the participants should be encouraged to exchange their experiences. Certificates may be awarded to the participants.

- 4.2 Like-wise, state-level camps of opinion leaders may be held towards the end of the year. In these camps, two outstanding opinion leaders may be invited from each district. The various Media-Units be approached to cover the State Level Camps for wider publicity and dissemination of the deliberations. In bigger states, instead of state level camps, such camps may be organised on regional level.

5. Allocations of Camps

- 5.1 On an average, about six opinion leaders camps are usually to be allotted for each Primary Health Centre, depending on the availability of funds. In the beginning of each year, the district MEM Functionaries may chalk-out the plan for organising and holding the camps. In each district, there may be socio-economic and geographical variations and looking upon these aspects, a district annual plan for opinion leaders' camps may be developed and the allocations may be made accordingly.
- 5.2 The family planning opinion leaders' camps may also be organised in the urban areas among the slum dwellers, as well as in the industrial areas, among the Trade Union leaders or industrial workers in industrial set ups.
- 5.3 In rural areas, camps can also be organised for the sepcific groups like teachers, ICDS workers, Mahila Mandals, Village dais, Village Health Guides, adult literacy teachers, agricultural extension workers, members of cooperative societies etc.
- 5.4 It must be ensured that in organising all such camps there is enough representation of women. At least about twenty five percent of the participants must be ladies. Separate camps may also be organiseed for women opinion leaders.

6. Selection of participants

- 6.1 The number of participants in one camp should be around 40. They should include both formal and informal leaders. Pradhan/Surpanch, the members of the Panchayat, Office bearers of cooperative societies, the school teachers, the postman are the example of formal leaders whereas the dai, the barber and the priest of the village temple or imam of Masjid are the example which fall under the category of informal leaders.
- 6.2 For the purpose of Family Welfare Leaders' Camp, we are concerned with such influential and respected persons who are interested in family planning and are having the potential of becoming active promoters of the programme. Thus, a careful selection of participants is very important, so that the camps prove to be purposeful.
- 6.3 Following points need to be kept in view while persons to participate in these camps are selected:
- a) Persons who have the potential of becoming active promoters of the family welfare programe should be identified and be invited to participate in the camps.
 - b) Prominent persons from diverse walks of life like, youth leaders, social workers, innovative farmers, representative of various religious organisations and women's groups should be contacted and be persuaded to attend the camps.
 - c) Efforts should be made to invite women leaders, members of Mahila Mandals, women teachers and other female functionaries engaged in the work of social development.

- d) Separate camps should be organised for the women leaders belonging to specific groups so that problems related to women may be discussed freely and frankly.
- e) Leaders from minority communities must be encouraged and it must be ensured that they are adequately represented.
- f) Village-wise, areawise and community-wise representation should be ensured.
- g) Satisfied family planning acceptors should particularly be invited and their experiences should be discussed at length with a view to removing the misconceptions, apprehensions, misgivings and doubts lurking in the minds of people.
- h) Retired Government servants, ex-servicemen, and other educated and progressive personalities available in the area should be tapped and persuaded to participate in such camps.
- i) Beside the health and family welfare workers, the functionaries of other developmental departments and voluntary organisations operating in the area must be associated with these camps.
- j) Invitations may be given to sufficient number of opinion leaders so that 40 participants may be present in a camp.

7. Arrangements for the Camp

- 7.1 Arrangements for holding the camp should be made well in advance. It would be better to have the discussion and meetings with other Departments and Organisations about the venue and date may also be ensured that this does not coincide with their important programmes and public meetings.
- 7.2 Suitable educational and motivational material must be procured in advance for distribution to the participants.
- 7.3 Place of holding the camp must be adequate and appropriate. Common hall of the B.D.O's Office, school building, Panchayat Bhavan are some of the places which may be appropriate and convenient. If no suitable place is available the arrangement may be made for putting a Shamina and Dari. This expenditure should be met out within the prescribed ceiling of expenditure.
- 7.4 The primary responsibility for holding the camp is that of the Medical officer in charge of Primary Health Centre. He should, therefore, be present during the entire period of the camp. The representatives from the district Family Welfare Bureau must also be there along with necessary media aids.
- 7.5 The listed participants should be intimated well in advance (preferably by written invitation) about the date, venue, time and purpose of the camp.
 - i) Names of those who will lead discussions with the participants on different subjects be finalised sufficiently in advance. Talking points etc. should be prepared for them and for the guest speakers.
 - ii) Time schedule of the camp, after making necessary adaptations as per local requirements should be finalised sufficiently in advance.

- iii) Appropriate training material, educative films, models exhibitions should be shown to the participants and necessary arrangements for their display should be made.
- iv) Refreshments and safe drinking water etc. for the participants and for others involved in the organisation of the camp should be arranged.
- v) For sustaining the interest of the participants, necessary arrangements should also be made for the entertainment/recreational activities like folk performance etc.
- vi) Specific tasks for various workers in respect of the organisation of the camp should be enlisted and be communicated to the concerned workers well in advance.
- vii) The forms of the certificates to be awarded to the participants at the close of the camp should be got printed in advance on good quality paper in an attractive manner.
- viii) The organisers should prepare follow-up action plan during the discussion and accordingly the participants be assigned specific roles and responsibilities. The organisers should also assign responsibility to their staff members to keep in touch with the opinion leaders as per the time schedule. It must be ensured that these opinion leaders do not lose interest in the Family Planning Programme and help them in acting as 'Centres of Support' and 'agents of change' in their villages.

8. Suggested Content Schedule

Keeping in view the objectives of camps the following schedule is suggested for a camp of one day duration. The organisers may make changes in the content and schedule to meet the needs of participants and local requirements.

Programme schedule

Programme	Methods	Time
i) Registration, Welcome and Inauguration (aims, objective) and scope of the camp may be highlighted in welcome address)	Talk	1/2 hr.
ii) Need and importance of Family Planning for quality of life	Talk discussion	1/2 hr.
iii) Health Education related to <ul style="list-style-type: none"> a) Breast feeding b) Immunisation c) Birth spacing d) Oral rehydration therapy e) Growth monitoring f) Nutrition for pregnant women and children. 	Group Discussion	1 hr.
iv) Human Reproductive System and methods of family planning.	Talk/discussion with the help of tapes, slides, films, charts film strips, flash-	1 hr.

card strips, flashcards and other locally available audio-visual aid.

- | | | |
|--|--|---------|
| v) Health and Family Welfare Services/ facilities and incentives offered to beneficiaries and others under Family Welfare Programme. | Talk/discussion explain where services are available : services like MCH prenatal and postnatal care, immunisation nutrition and contra-ception both spacing and terminal facilities and incentives for family planning should be highlighted. | 1/2 hr. |
| vi) Role of opinion leaders in the promotion of the F.W. Programme and formulation of village action plan to be implemented by them. | Talk/Discussion | 1/2 hr. |
| vii) Open session—Removal of doubts, misgivings and experiences of acceptors. | | 1 hr. |
| viii) Concluding remarks | | 1/2 hr. |
| ix) Certificate distribution to the participants. | | 1/2 hr. |
| x) Vote of thanks | By M.O./C PHC | |

9. Conducting the Camps

- 9.1 In subject matter of the contents suggested should consist of applied and functional information having relevance to local needs instead of giving theoretical and highly academic information. During the course of talks and discussions, as far as possible, the examples and illustrations related to the local situations should be given. The talks and discussions may be made more informative and interesting by showing films, charts, and use of songs, poems and illustrations from sacred works like Ramayan, Holy Koran etc.
- 9.2 These camps are non-formal in nature. The camps must not take the shape of a classroom. The relationship between the participants and organisers should be very free, frank and informal as is generally seen between friends, colleagues and members of a team. The participants should not have any feeling of hesitation or fear in expressing their views.
- 9.3 Detail of points to be discussed under various topics suggested earlier are given below for the guidance of organisers. These are suggestive and may be enlarged or shortened or modified as per local requirements.
 - ii Need and importance of the Family Welfare Programme for better quality of life.
 - a) Why Family Planning?
 - Rural Problems vis-a-vis family welfare
 - Child Health
 - Mother's Health

- Education of Children
- Family income, budget and indebtedness
- Housing, sanitation and transport
- Employment
- Nutrition
- Environmental pollution and its impact on health
- Education of girls and status of rural women.
- Daughters are as good as sons.
- Age of marriage of girls and boys.
- Living standards and happiness of family life.
- b) Salient features of Family Welfare Programme.
 - Voluntary basis of the Programme
 - Emphasis on all methods with special reference to spacing.
 - Freedom of choice to select any method
 - Right age for marriage
 - Priority in relation to rural problems
 - Stress on education, health, nutrition and total welfare of Family.
 - Family Planning and rural development
 - Ultimate goal — improvement in the quality of life.
- ii) Methods of Contraception
 - How contraception
 - Concept of *Brahamcharya*
 - Conventional Contraceptives
 - IUD and Oral Pills
 - Voluntary Sterilisation
 - Medical Termination of Pregnancy
 - Precautions to be taken while using Family Planning Methods.
- iii) Health and Family Welfare Services/Facilities and incentives.
 - Maternal and Child Health Services.
 - Immunisation services.
 - Nutrition services.
 - Medical and Health Services at PHC/Sub-Centres
 - Family Planning Services at PHC/Sub-Centres
 - Services offered by Community Health Guides and Trained Dais.
 - Incentives offered to the acceptors, motivators and the community
 - Scheme of green card, if any.

- iv) Roles and responsibilities of Opinion Leaders in the promotion of family welfare programme, formulation of village action plans to be implemented by them.
 - Assistance in conducting target couple survey and updating it.
 - Support and cooperation to health and family welfare workers in performing their duties in the villages.
 - Educating the people about correct concept of Family Welfare Including its need and importance.
 - Assisting in arranging F.W. services including mini-camps, Family Welfare campaigns and fortnight, immunisation and contraceptive distribution.
- v) Constituting village health and family welfare committees and to take active part in meetings and activities of such committees.
- vi) Forming Mahila Mandals and Youth clubs and to organise family welfare and MCH services for the members with the help of Health Workers.
- vii) Preparation of outlines of village action plans for eligible couples to adopt small family norm.

10. Follow-up of the Camps

- 10.1 Experience has shown that in the past post-camp follow up of the opinion leaders' camps by the local family welfare functionaries has often been neglected. Constant and continuous liaison with the camp participants is very essential for obtaining effective results of the camps.
- 10.2 All the local family welfare functionaries must have the full knowledge about the participants who attended the camp. They must contact them regularly.
- 10.3 Educational material should be provided to these opinion leaders from time to time. The field workers should form small educational groups in the villages alongwith the satisfied acceptors. Such groups should be utilised for motivational activities for the eligible couples.
- 10.4 Some of the opinion leaders should be encouraged to distribute conventional contraceptive to the couples. The contraceptives must be supplied to them regularly. The local supervisory official including block extension educator. Primary Health Centres should have regular contacts with them and give them necessary support and social recognition.
- 10.5 During the field visits, the local family welfare workers and their supervisors must also try to discuss the needs and problems posed by opinion leaders. Sincere and genuine efforts must be made to solve them and to gain their confidence.
- 10.6 Deserving and active opinion leaders must be recommended for participation in district level and state level family welfare leaders camps.

11. Other important points to remember

- 11.1 In villages, the Family Welfare Leaders' Camps should be organised during the lean period, when there may not be sowing or harvesting season and people are not too busy. These camps may be organised particularly before the special campaign drive. This will ensure during the whole year.
- 11.2 Efforts must be made to get good media coverage of these camps by local media units including Radio, T.V. and Press.

- 11.3 Actual timings of the camps should be kept as per the convenience of the participants. The Programme should be arranged in such a manner that there is sustained interest of the participants.
- 11.4 Distinguished local leaders of the community should be invited for inauguration and concluding functions of the camps.
- 11.5 As far as possible, adequate use of audio-visual aids should be made in discussing various aspects/points.
- 11.6 Camp environment must be informal in nature and programmes of entertainment and folk art performance may be kept in between the serious talks and discussions.

12. Evaluation

- 12.1 As far as possible, these camps should be evaluated by the District Extension and Media Officer, with the help of State E&I Cell. Evaluation of these camps may be done on the basis of following indicators:
- i) Number of opinion leaders invited and number of leaders responded to invitation and participated in the camp.
 - ii) Participation by field functionaries of other development departments.
 - iii) Use of various audio-visual aids in the camp.
 - iv) Distribution of educational and motivational literature to the participants.
 - v) Participants response and attitude towards the camps and their suggestions for making them more effective and purposeful and the interest generated in them for the adoption of small family norm.
 - vi) Follow up done by the local family welfare staff of the participants after the camps. Role played by oriented opinion leaders in educating and motivating eligible couple to adopt small family norm on the basis of contraceptives distributed and the cases motivated for sterilisation/IUD etc.

13. Reporting

- 13.1 Reporting and monitoring about the camps is also very important activity which have very close bearing with the development of the programme. Regular inflow of the reports help in recognising and modifying the programme. Hence, reports of opinion leaders' camps should be sent to higher authorities on regular basis and reported to the Government of India in the quarterly report of MEM activities.

14. Involvement of Panchayati Raj Institutions

- 14.1 It has been observed that active participation of Panchayati Raj Institutions in opinion leaders' camps has been very rewarding. The places where organisers of these camps were able to enlist the support of these institutions and were able to make them participate in these camps, good results, accrued in respect of the acceptance of family planning practice. It is, therefore, suggested that village Panchayats, their sarpanchs and members should be involved not only in the organisation of camps but right from the planning stage and also in post-camp follow-up work. Similarly, Block Panchayats and Zila Parishads and other comparable local bodies should be involved in District Level Camps. Local legislators and M.Ps may also be associated with these camps.

- 14.2 In addition to Panchayati Raj Institutions, non-governmental voluntary agencies working in the field of social welfare/rural development and operating in the area should actively be involved in this equally important area of social transformation. Womens' organisations and youth organisations should also not be overlooked. Their participation in such camps is very crucial. Efforts should be made to form village family welfare education corps and in addition to formal and informal opinion leaders, representatives of women's clubs, youth clubs etc should be infused in such corps.
- 14.3 Apart from inviting the village, Block and Zila Pramukhs to participate in Family Welfare Leaders' Camps, separate camps may also be held for them at the Distt/Regional and state levels. The expenditure on these camps may be incurred as per financial pattern applicable for Distt. level and state level camps.

15. Financial aspects

- 15.1 An expenditure of Rs. 7.50 per participant with a ceiling of Rs. 300/- for a one-day camp of 40 or more participants per pattern given below is permissible for village, opinion leaders' camp or camps in urban slums.

- i) An average expenditure of Rs. 5/- per day per participant on food/refreshment etc.
- ii) Average expenditure at the rate of Rs. 2.50 per participant on meeting incidental expenditure on transport, educational aids, hiring of furniture and shamiana etc. as per requirement.

If the number of participants is less than 40, the expenditure admissible shall be proportionate to the number of participants attending the camp. In order to have maximum advantage of group interaction for developing positive attitude towards small family norm, the ideal number of participants should not be less than 20 and not exceed 40.

- 15.2 The expenditure on District level camps shall be admissible at the rate of Rs. 30 per participant with a ceiling of Rs. 1200/- per camp for 40 participants or more. These camps will be organised at the rate of one camp per district per year. The participants will be paid to and from actual second class train/bus fare from the places of their residence to the venue of the camp. The participants may be paid in cash out of pocket expense not exceeding Rs. 5/- per head. Participants shall be given meals out of these funds. This amount also includes contingent expenditure on tea, snacks, educational aids, remuneration to artists etc.
- 15.3 A sum of Rs. 100/- per participant shall be admissible for State level or regional level camps. Bigger States, where one state level camp is unmanageable and is not conducive to achieve good results, camps in such states may be organised on regional basis at the rate of one regional camp for a population of one crore people with marginal adjustments so that the Districts to be included are not broken.
- 15.4 Arrangements for the lodging and boarding of participants are to be made out of the funds provided for opinion leaders' camps. The participants should also be given actual expenditure incurred by them in the form of Bus/second class train fare to and from. The participants may be paid in cash not exceeding Rs. 10/- per participant to meet out of pocket expenses including local transport. In addition to the expenditure on lodging/boarding arrangements and travel expenditure, the contingent expenditure on hiring of furniture, putting up a shamiana, procuring of educational material honorarium to talk artists etc. can also be met out of the funds, allocated for Orientation Training Camps.

Introduction

The National Family Planning Programme was launched in 1951 with a clinical approach. Extension Education approach was adopted in mid-sixties and a separate Department of Family Planning was created in 1966 in the Ministry of Health. During the Fourth Five Year Plan (1969-74) the Programme was made an integral part of MCH activities of PHCs and sub-centres. In 1970, an All India Hospital Post Partum Programme and in 1972, the Medical Termination of Pregnancy (MTP) were introduced. During the fifth Five Year Plan (1975-80) there have been major changes. In April 1976, the country framed its first "National Population Policy". In June 1977 a new population policy was formulated ruling out compulsion and coercion. The Ministry of Family Planning was renamed Ministry of Family Welfare. The Rural Health Scheme was launched in 1977 and the involvement of the local people (e.g. Health Guides, Trained Dais, and Opinion leaders) in the programme was aimed at accelerating the pace of progress of the programme. The Family Welfare Programme has been included in the revised 20 point programme of 1986.

Future Goals and New Approaches.

Long term goal is to reach zero population growth rate by 2000 A.D. The mid term goal is to reach Net Reproduction Rate of Unity (NRR:1) by 2000 A.D with a birth rate of 21, death rate of 9 and infant mortality rate below 60.

Specific Objectives for 1986-90.

Raise mean age at marriage for women to over 20 years. Promote two-child family limit as preferred family size. Substantially increase demand for contraception to achieve a couple protection rate over 42%. Improve and strengthen the infrastructure and the quality of services.

Enhance child survival through universal immunization and promotion of Oral Rehydration Therapy. Broad-base programme outreach by maximum involvement of non-governmental structures.

Secure more effective intra-sectoral and inter-sectoral coordination.

Streamline and improve programme management at all levels. Generate environment for fertility decline through relevant socio-economic interventions.

Major tasks for VII Plan

31 million sterilisations, 212 million IUD insertions and 14.5 million CC and OP users.

Convert awareness and Knowledge into acceptance through all methods of communication.

Immunize 82 million infants and 90 million mothers. Universalize (150 million households) the use of Oral Rehydration Therapy.

Population education to all children in the age group 11-15 years (109 million).

Family life lessons for youths (15-19 years). Population Education for those out of schools and colleges as a part of Adult and Non-formal Education System. One round of training for all personnel to improve skills. Intra and Intersectoral coordination amongst various development departments.

Effective communication programmes and improved quality of F.P. services.

Research for developing acceptable techniques and improving acceptability of existing ones.

The two-child family norm to be promoted through material & non-material incentives.

Female literacy and employment programmes.

Involve the community at large in the programme.

Approaches & Strategies

Beyond Family Planning.

Certain socio-economic correlates greatly influence fertility behaviour. Special focus for the following:

1. Increasing mean age at marriage
2. Raising status of women
3. Increasing female literacy
4. Enhancing Child Survival & Development
5. Linkage with Poverty Alleviation Programme
6. Old Age security.

Infrastructure

1. Augmentation of Infrastructure
2. Upgrading Technical Services.
3. Integration of F.P. with other Socio-Economic Development Programmes.

Information Education Communication

Multi-media Communication Campaigns will be mounted with primary focus on:

- Reinforcing the two-child family norm.
- Promotion of inter-spouse communication.
- Child Survival programme.
- Increasing the age of marriage.
- Neutralising male preference syndrome.
- Improving the image of family planning and health workers.
- Providing incentives to family planning acceptors.

Voluntary Action

Family planning has to be made peoples movement. Non-Governmental structures will be promoted to supplement and strengthen the family planning activities.

Community Participation

Community participation is vital for programme success.

- Popular Committees to plan and oversee the implementation of the programme at all levels will be organised.
- Special schemes will be developed for involvement of organisations of women and youth.
- Medical students will be involved in rural and urban slum work.
- The parliamentarian and other leaders at various levels will be involved in motivational work.
- The practitioners of Indian system of Medicine will be involved in motivational work and in providing services.
- Programme Management will be improved at all levels by reorientation towards modern programme management.
- Primary Health Centre Management will also be improved by training the M.O. PHC in skills of programme planning and management.
- Mobility will be improved by maintenance of vehicles at optimal efficiency, and making para-medical workers mobile by providing them loans for two-wheelers. Supplies of drugs, vaccines, equipment, etc., will be regularly made. Their upkeep & maintenance will be attended to.
- Eligible couple Registration will be regularly updated as it is an effective instrument of monitoring and management of acceptance of family planning.
- Intra-sectoral and Inter-sectoral coordination will be strengthened.
- More emphasis will be placed on manpower development. A scheme for career development to provide adequate opportunity to various health functionaries will be implemented.
- A management Information System will be developed from the sub-centre level to the national level. This will facilitate monitoring and evaluation of the performance and the system will relay information, guidance and feedback from higher level to lower formations.

HANDOUT 4.2.1 Duties of MO PHC with regard to Family Planning

1. He will provide leadership to his team in the implementation of the family Planning Programme in the PHC catchment area and PHC should function as a centre of FP movement.
2. He will be responsible for proper and successful implementation of Family Planning Programme in PHC area, including education, motivation, delivery of services and after-care.
3. He will be squarely responsible for giving immediate and sustained attention to any complications the acceptors develop due to the acceptance of Family Planning methods.
4. He will extend motivational advice to all eligible patients he sees in the OPD.
5. He will get himself trained in tubectomy, wherever possible, and organise tubectomy camps.
6. He will organise and conduct vasectomy camps.

7. He will seek help of other agencies such as Distt Bureau, Mobile Van and other associations/ voluntary organisations for tubectomy/IUD camps and MTP services.
8. He will ensure adequate supplies of equipment, drugs, educational material and contraceptives required for the services/programmes.
9. He will provide leadership and guidance for special programme such as Family Planning campaigns, festivals and fairs.
10. He will organise regular staff meetings to review the progress made and to discuss the problems and future plans.
11. He is expected to train himself in communication techniques so that he can provide leadership and guidance to educational and motivational group talks to eligible couples.
12. He will develop and maintain cooperative work-relationship with other agencies and opinion leaders in the PHC, in order to generate and sustain Family Planning as a movement.
13. He should encourage and give all help and assistance to private medical practitioners and practitioners of ISM in the implementation of F.P. programme.
14. He will ensure proper and up-to-date maintenance of EC registers through spot checking.
15. He will ensure that the block level committee and other committees in catchment area are properly constituted and made operable.

HANDOUT 4.2.2

Steps taken to improve programme performance under the Family Welfare Programme

- (i) In order to ensure maximum utilisation of infrastructure available under the Family Welfare Programme, a procedure has been laid down to schedule weekly camps at each P.H.C. area for provision of family welfare services and also one day weekly camp at sub-centre level for IUD insertions.
- (ii) Performance under the Family Welfare Programme is being reviewed periodically in the meetings of the State health Secretaries.
- (iii) To meet the shortfall in achievement of targets under spacing methods, special drives were organised during the months of June, July and August, 1986. Another campaign was launched from September, 1986 with the primary objective of fully meeting the planned targets assigned to the States during 1986-87 by optimal utilisation of the available infrastructure. During 1987-88 also, Family Welfare Programme activities will be carried out on an intensive basis as was done during 1986-87.
- (iv) A technical committee has been constituted to supervise the quality of services and related aspects. This Committee has already held its meetings.
- (v) A scheme of Popular Committees has been introduced at State, District and Block levels. The State level Committees are under the Chairmanship of Chief Minister, the District level Committees are under the Chairmanship of District Collector or a prominent social worker of the District and the block level committees are under the Chairmanship of the Pramukh of the block. These Committees

are to assist the State and local administration to implement the Family Welfare Programme in a more effective manner and ensure political commitment and community involvement.

(vi) Under the Universal Immunisation Programme, 60 districts were covered during the year 1985-86 and 90 districts during 1986-87 in addition to the catchment areas of all the medical colleges in the country. During the year 1987-88, another 120 districts are proposed to be covered under the programme. The efforts at universal immunisation are expected to go a long way in reducing infant and child mortality and enhancement of acceptance of family planning.

(vii) A study was got conducted through the Indian Institute of Management, Ahmedabad into the low facility utilisation in the four poor performing States of U.P. M.P. Bihar and Rajasthan. Follow up action on its recommendations is being taken by the State Governments concerned to bring about a qualitative improvement in the management of the programme.

(viii) Report of the Committee on Staffing Pattern in the States/U. Ts. for Family Welfare Programme has been finalised. States/U. Ts. have been requested to formulate their proposals regarding staffing pattern in their States keeping in view their local requirements and send the same for consideration and finalisation by a Committee appointed for this purpose. New staffing pattern has to take effect from 1.4.87.

(ix) Instructions have been issued by the Ministry of Urban Development to allow the incentive rebate of 1/2% in interest on House Building Advance to loanee Central Government employees if they or their spouses undergo sterilisation operation after one surviving child.

(x) A decision has been taken to allow the States/U. Ts. to utilise the award money at their discretion so long as it is for vital aspect of the Family Welfare Programme.

HANDOUT 4.3.1 Maternal and Child Health Service

In any community, mother and children constitute a priority group, together they constitute 65 per cent of the total population. Mothers and children not only constitute a large group but they are also a vulnerable or special risk group. The risk is connected with childbearing in the case of women and growth, development and survival in the case of infants and children. Since the problems affecting the health of mother and child are multifactorial in origin, the MCH care services are provided as an integrated 'package' in order to achieve a greater impact.

The mother and child health and family planning services were integrated into the Basic Health Services of the country during the Fourth Five Year Plan. This integration is based on the premise that it is inconvenient for the mother to go to one place to receive care for herself, to another for care of her children and yet to another for family planning. Combined services for mother and child promote continuity of care and reduce the number of visits the family has to make. A new approach was initiated during Fifth Five Year Plan, that is, to provide MCH, family planning, nutrition and immunisation services as a 'health care package'.

The 'package' components consist of:

1. Antenatal care

2. Intranatal care
3. Postnatal care
4. Nutritional health
5. Immunisation
6. Primary health care and rational family planning.

Infrastructure — MCH and FP services in rural areas are delivered through establishment of Community Health Centres, Primary Health Centres and Sub-Centres.

It has been envisaged to have one sub centre with a female health worker and male health worker for every 5000 rural population in general and for every 3000 population in tribal, hilly and backward areas. It has been decided to have a PHC for every 30,000 rural population in general and 20000 population in hilly, backward and tribal areas. Specialist back up support is being provided to PHC and sub-centre by Community Health Centre.

Programme components of Maternal and Child Health Care *and care of Pregnant Women and Nursing Mothers.*

Level I Care (Sub-centre and Primary Health Centre)

1. *Antenatal care* — Prenatal care consists of an early detection of pregnancy, identification of high risk mothers, immunisation of the mother against tetanus, nutrient supplements with iron and folic acid followed by an antenatal check up of pregnant mothers at 20th, 30th, 34th and 38th weeks of pregnancy. This antenatal assessment is aimed at detection and management of anemia malnutrition, pre-eclampsia, heart disease and an early diagnosis of intra uterine growth retardation and prevention of neonatal tetanus.
2. *Intranatal Care* — It consists of (a) conducting delivery in a well lighted, clean room (either in the patient's own home or at the sub-centres) of normal cases with proper asepsis, (b) referring the abnormal cases to the PHC, subdivisional or district level hospital as the case may be.
3. *Postnatal care* — It comprises (a) a check up of the newly delivered mother once daily for the first 7 days and twice weekly for the next three weeks, (b) encouraging breast feeding (c) educating the mother regarding personal hygiene, proper diet, and (d) at a later date suitable advice regarding family planning methods.

Level-II Care (Selected Taluk/Sub-divisional/Dist. Hospitals)

1. *Antenatal care* — The prenatal care is given on the same as in level-I care. Since complicated and referred cases are dealt with, at these centres, more frequent antenatal check up and when necessary is done by the specialists. Specialised equipment, instruments and facility of blood transfusion is available for dealing with such complicated cases.
2. *Postnatal care* — The high risk cases delivering in the level-II hospital are kept as indoor patients for the first seven to ten days and later, followed up in the postnatal clinics or by home visits, with emphasis on educating them regarding diet, personal hygiene, exercise, breast feeding and later on advising them regarding family planning through the post partum centres established at these levels.

Level-III Care (Medical colleges and selected district-level hospitals)

1. *Antenatal care*: The prenatal care is given in the level-III hospitals through well established antenatal clinics where specialists are available, alongwith the special equipments such as ultrasound, colposcope etc. and facilities for sophisticated biochemical tests required for ensuring the well being of the foetus in utero.
2. *Intranatal care* — Labour rooms at these centres have a foetal monitoring system, facility for blood transfusion and a good operation theatre near the labour room, with specialists to deal with any abnormality arising during labour.
3. *Postnatal care* — This is given for the first few days in the hospital by daily check up of the mother and baby and later on in the postnatal clinic with particular emphasis on educating the mothers regarding diet during postnatal period, hygiene, breast feeding exercise and later on family planning methods through the post-partum centres available at all these centres.

CENTRALLY SPONSORED SCHEMES:

i) Prophylaxis against nutritional anaemia amongs mothers and children:

Anaemia is one of the major health problems affecting women of child bearing age and children in the country. Anaemia in pregnant mothers is an important cause of maternal mortality. Apart from affecting the health of the pregnant mothers, it also affects the newborn adversely. Studies have shown that the great majority of the causes of anaemia in mothers are of nutritional origin. In order to prevent nutritional anaemia in mothers one tablet of Iron and Folic Acid containing 60 mg of elemental iron (200 mg. of ferrous sulphates) and 0.5 mg. folic acid is given daily. The beneficiaries of the scheme are expectant and nursing mothers and other women who have accepted F.P. methods. For children one tablet of iron and folic acid containing 20 mg. of elemental iron (67 mg. of ferrous sulphate) and 0.1 mg. of folic acid is given daily to prevent dietary deficiency. The scheme is envisaged for prophylactic management of border line cases to prevent them from development of anaemia. All fresh cases of anaemia should however by given active ante-anaemic treatment. The level of Haemoglobin of 10 gm.% for women and 8 gm.% for children should be taken as the critical level for deciding whether anti-anaemia treatment or prophylactic management will be required. The beneficiaries under the prophylaxis scheme would normally have to receive the tablets for a period of 100 days. The scheme has been taken up during 4th Five Year Plan and is being continued in successive plans. It has been envisaged to cover 100% eligible mothers and children by 1990.

ii) Prophylaxis against blindness due to Vitamin 'A' deficiency.

Surveys carried out in the Southern and Eastern parts of the country have revealed that 20-30% of the children in the pre-school age group have eye-manifestation as a result of Vitamin 'A' deficiency.

The most severe form of Vitamin 'A' deficiency — Keratomalacia, coupled with malnutrition causes blindness amongst children. Investigations in India and other parts of the world have shown that Vitamin 'A' in a large dose is administered to children by mouth, the concentration of Vitamin A is maintained in the body in such a manner that a child is protected from Vitamin A deficiency for almost one year. Vitamin A is readily stored in liver, gradually for utilisation in the body. Under the scheme, high potency Vitamin A (2 lakh international unit) is given orally to preschool children (1-5 years) once in six months.

The scheme has been taken up during 4th Five Year Plan and is being continued in successive plans. It has been envisaged to cover 100% eligible children by 1990.

(Figures in million)

	1985-86	1986-87	1987-88	1988-89	1989-90
	Target	Achieve- ment	Target	Achieve- ment	Target
1. Prophylaxis against nutritional anaemia among					
1) women	14.00	18.01	18.64	20.07	22.0
2) children	14.00	17.05	19.43	17.73	22.0
2. Prophylaxis against blindness due to Vit. A deficiency (metered doses.)	24.96	29.38	28.97	30.12	33.0

Budget allocation during 7th Plan = Rs. 2980 lakhs
(Rs. in lakhs)

	BE	RE
1985-86	350	450
1986-87	430	580
1987-88	500	611
1988-89	700	—

iii) Immunisation

Immunisation of expectant mothers and children — Pregnant mothers are protected against tetanus by immunisation with T.T. This also prevents neonatal tetanus which is an important cause of infant mortality. Infants are given 3 doses each of DPT and polio and 1 dose each of BCG and measles. Booster doses of DPT and polio are given next year. New entrants of primary schools are given DT. Booster doses of TT are given to school children at 10 and 16 years. 100% mothers and 85% children will be covered by 1990 under Universal Immunisation Programme.

iv) Oral Rehydration Therapy:

Diarrhoeal diseases are a major health problem in this country specially among children below 5 years of age. One hundred million children belonging to this age group are estimated to suffer from 300 hundred episodes of diarrhoea per year, of which 10% i.e. 30 million may develop dehydration and 1% i.e. 3 million may face death. To decrease the mortality due to dehydration in diarrhoeal illness in children the programme of oral rehydration therapy was started in late half of 1986 with the aim of creating awareness in the community, that diarrhoea can be treated at home with HAF;

equipping the households with necessary skills to diagnose a case of diarrhoea, prepare sugarsalt solution and proper use of home made or available fluid; educating the mothers on feeding during and after diarrhoea and making ORS widely available.

Under this programme the entire country is expected to be covered by 1990 AD taking up districts as per UIP pattern i.e. 90 in 1st year, 90 in 2nd, 120 in 3rd year and rest in fourth year. A sum of Rs. 25 crores has been allocated during the Seventh Plan.

The major components of this programme are:—

1. Training of medical and para-medical personnel at all levels.
2. Extensive health education of the population, especially the mothers.
3. Streamlining the supply of Oral rehydration salt.
4. Augmentation of staff and mobility.

In 1986-87, Rs. 116 lakhs, in 1987-88 Rs. 423 lakhs were allocated and in 1988-89, Rs. 500 lakhs have been allocated. One vehicle for State Programme Officer and one each for the Principal of Health and Family Welfare training centre (i.e. 31 + 53) have been provided to improve the mobility for training purposes. Till now 110 faculty members have been trained who will further impart the training. To strengthen the programme provision for the post of Research Officer and steno-typist at the State Level, have been made. Films, modules and other training material have been prepared with WHO/ UNICEF help. Indian Medical Association has been actively involved in the programme and have trained more than 25000 doctors. Excise Duty exemption has been given on ORS. Action has been taken to convert ORS as Over the Counter (OTC) product.

v) Integrated Child Development Services (ICDS) Programme:—

Persuance of the national policy for children, adopted in 1974 and on the recommendation of the Inter Ministry Health Study Team, set up by the Planning Commission, Ministry of Social Welfare introduced ICDS Scheme on an experimental basis in tribal, backward rural areas and urban slums during 1975-76. To start with 33 ICDS Project schemes were established with a view to provide integrated package of services, consisting of:—

1. Supplementary Nutrition.
2. Immunisation.
3. Health Check-up and referral services.
4. Nutrition health education.
5. Non formal education to children.

The beneficiaries under this scheme are pregnant and nursing mothers and children below 6 years of age. These services are to be supplemented with functional literacy for adult women. Convergence of safe drinking water is also envisaged in this scheme.

The focal point for the delivery of services is an Anganwadi, covering a population of 1000 and manned by a female worker drawn from the local community. There are 3-5 Mukhya Sevikas to supervise the work of the group of anganwadi workers. The Child Development Project Officers (CDPO) is the overall incharge of the project. The staff is under the social welfare department of the state. At present about 1700 ICDS projects have been functioning in the country and coverage under ICDS is gradually being extended.

Strategies to improve women's and children's health and steps taken:

The National Health Policy provides highest priority for the improvement of maternal and child health with a special focus on the less privileged section of the society. While efforts are continuing at providing refresher training and orientation to the traditional birth attendants, schemes and programmes are being intensified to ensure that progressively all deliveries are conducted by competently trained persons so that complicated cases receive timely and expert attention within a comprehensive programme providing antenatal, intranatal and postnatal care.

Some of the goals for Health and Family Welfare Programmes are as follows:

Indicator	Current Level	Goals	
		1990	2000
1. Infant mortality rate			
Rural:	107 (1985)		
Urban:	59 (1985)		
Total:	97 (1985)	87	Below 60
Perinatal mortality	67 (1976)		30-35
2. Crude death Rate	11.8	10.4	9.0
3. Pre-school child (0-4 yrs) mortality	41.2 (1984)	15-20	10
4. Maternal mortality rate	4-5 (1976)	2-3	Below 2
5. Life expectancy at birth			
Male	54.1 (1980)	57.6	64
Female	54.7 (1980)	57.1	64
6. Babies with birth weight below 2500 gms (percentage)	30	18	10
7. Crude birth rate	32.9 (1985)	27.0	21.0
8. Effective couple protection (percentage)	35.8	42.0	60.0
9. Net Reproduction Rate (NRR)	1.48 (1981)	1.17	1.00
10. Growth rate (annual)	2.25 (1971-81)	1.66	1.20
11. Family size	4.4 (1975)	—	2.3
12. Pregnant mothers receiving antenatal care (%)	40-50	60-75	100
13. Deliveries by trained birth attendant (%)	30-35	80	100
14. Immunisation status (% coverage)			
TT (for pregnant women)	20	100	100
TT (for school children)			
10 years		100	100
16 years		100	100
DPT (children below 1 year)	25	85	85
Polio (infants)	5	85	85
BCG (infants)	65	85	85
DT (new school entrants 5-6 years)	20	85	85

Child Mortality

Definition

Infant Mortality Rate (IMR)	:	Number of infants dying under one year of age in a year per 1000 live births of the same year.
Neonatal mortality rate	:	Number of infants dying within the first month of life (within 28 days) in a year per 1000 live births of the same year.
Postnatal mortality rate	:	Number of infants deaths of 28 days to one year of age per 1000 live births in a given year.
Perinatal mortality rate	:	Number of still births plus foetal death within 1st week of delivery per 1000 live births in a year.

The infant mortality rate (IMR) is considered to be an indicator of socio-economic and health conditions prevailing in the community. The IMR in India was about 161 in 1947 and it has been progressively declining since then. It was 104 in 1983-84 and has dropped to 95 per thousand live births in 1987.

HANDOUT 4.3.2 Basic activities in MCH and FP and your role as MO PHC

In the Primary Health Centre you will see patients referred to you by other members of the health team for consultation. Whenever possible you will conduct breech and forceps delivery, episiotomy and manual removal of placenta, you will be required to make decisions regarding conduction of abnormal delivery.

Vasectomy and tubal ligations will be performed according to the facilities available at the PHC.

Responsibilities.

1. All preventive and curative services for mothers and children coming or referred to you.
2. Patients admitted to PHC or seen therein; emergency consultations.
3. Examination of FP patients referred: provision of services.
4. All the pregnant women in the intensive areas should have ante-natal, natal and post-natal care arranged for them. Health staff must be trained to ascertain pregnant women 'at risk' and to refer them to you.
5. All children below the age of 5 years living in the PHC area should be immunised. Referred cases are your responsibility.
6. School health care in PHC areas; school entrants and children referred by teachers or parents.
7. Supervision of immunisation and vaccination programmes; all anti-rabies injections must be given by a doctor.
8. Selection and monitoring of children suitable for supplementary feeding programmes.

Concept of High Risk Approach

The 'risk approach' is a managerial tool for improved MCH care. Its purpose is to provide better care for all, but with special attention to those who need it most. The slogan coined by WHO is 'Something for all, but more for those in need – in proportion to that need'.

Guidelines for Identification of Risk Factors for Referral to Higher Levels.

A. GUIDELINES FOR TBA

Warning Signals for referral

I Present Pregnancy

1. Age less than 17 years – over 35 years
2. Height less than 145 cms.
3. Weight-less than 40 kg. or more than 70 Kgs.
4. More than 4 children
5. Last delivery within two years
6. History of severe bleeding in last pregnancy or labour or post delivery period.
7. History of repeated abortions, still birth or early neonatal death.
8. History of twin delivery.
9. Last baby weight below 2.5 kg. or above 3.5 kg.
10. History of preterm delivery
11. Scar on lower abdomen.
12. History of Eclampsia in last pregnancy, Malaria, Tuberculosis, Diabetes, Heart disease, Kidney disease.
13. Patient looks pale, gets breathless and tired.
14. Gets headache and giddiness, specially in last three months of pregnancy.
15. Bleeding P.V. any time during present pregnancy.
16. Undue swelling of the legs or all over the body.
17. Excessive vomiting in first half of pregnancy.
18. Passing less amount of urine with or without oedema.
19. Abnormal presentation.
20. Foetal movements less or absent.
21. Twin pregnancy or Hydramnios.

II Warning signals during labour

1. Membranes have ruptured early before pains started.
2. Delivery before term
3. Bleeding P.V. before delivery of the child.
4. Head presentation, taking more than 12-14 hours to deliver.
5. Hand prolapse, feet, or cord prolapse.

6. Placenta taking more than 1/2 hour to deliver.
7. Bleeding during or soon after III stage of delivery.
8. Baby is not breathing properly or getting cyanosed or not passed meconium or urine.

III Warning Signals Post Delivery Period

1. Haemorrhage.
2. Unhealthy bad smelling lochia.
3. Fever with or without rigor
4. Breast enlargement, breast abscess, inability to establish breast feeding.
5. Severe anaemia.
6. Unilateral swelling of leg with pain or tenderness and cramps.
7. Puerperal psychosis.
8. Baby with projectile vomiting, cord sepsis, bleeding.

Note: All the above risk factors during pregnancy, labour and post delivery period MPW(F) should be consulted and patient to be sent to the higher level accordingly.

B. WARNING SIGNALS FOR REFERRAL BY MPW(F)

1. Patients with all the warning signals mentioned above should be referred to PHC.
2. Should conduct normal deliveries and rest to be sent to PHC.
3. Patients with severe anaemia, high blood pressure, excess of oedema, excess of weight gain.
4. Undue enlargement of uterus, hydramnios.
5. Weight, height less than the usual for the corresponding gestation period.
6. Abnormal presentation.
7. Head size abnormally big – Hydrocephalus or small anencephal
8. History of bleeding mainly in III trimester.
9. Foetal movement less or history of sluggish foetal movement.
10. Known case of cardiac, respiratory or metabolic disease.
11. Albumin or sugar in the urine.

C. WARNING SIGNALS FOR REFERRAL BY MO(PHC)

1. Can deal with all normal pregnancy and some abnormal cases during antenatal period.
2. To deliver mainly abnormal cases at PHC.
3. Placenta Previa – bleeding PV in the second half of pregnancy.
4. Severe preclampsia, Eclampsia or Epileptic fits.
5. Severe Anaemia
6. Systemic disease
7. Hydramnios, Multiple pregnancy.

8. History of repeated abortions or premature deliveries.
9. Young primigravida below 17 years or elderly Primigravida over 35 years.
10. Multipara more than 4th parity.
11. History of still birth and early neonatal death.
12. Previous difficult deliveries.
13. History of previous operation on uterus.
14. Abnormal presentation in present pregnancy.
15. Short statured patients with height less than 145 cms.
16. Retained placenta.
17. Postpartum Haemorrhage-after starting the preliminary treatment.
18. Patient in labour with fetal distress.
19. Haemorrhage during postnatal period.
20. Thromboembolic phenomena.
21. Patients who need blood transfusion.

For Newborn

- a. Baby less than 2.5 Kg.
- b. Baby born 4 weeks before term (due date).
- c. Baby not breathing properly or cyanosed.
- d. Maldeformed baby.
- e. Jaundice
- f. Birth injuries.
- g. Concussions.

HANDOUT 4.4.1 Child Care

A major improvement in the health and well being of children is possible because of four basic strategies which have been made world famous by UNICEF and these strategies represent advances of altogether different order because they have the unique potential of being (a) simple practical information which can be understood and acted upon by all parents (b) so inexpensive that almost any family and any nation can afford to put them into practice (c) so universal in their relevance and so synergistic in their relationship with each other that they would strike at the heart of every child's health and malnutrition problem in almost every poor country (d) not dependent on profound changes in values nor do they go against the grain of people's own priorities.

These four strategies are:-

1. *Care of the new born weighing and growth monitoring of the infant:*

Thousands of babies die silently before their first birthday year after year and most commonly the cause of death as narrated by the mother is small size of the baby. If these babies are looked after

well, they can be saved from the risk of sickness and death. So it becomes important to recognise and manage these low birth weight babies.

A new born should be weighed immediately after birth and special care should commence soon if the baby is below 2500 gms.

Regular monthly weight gain is the most important single indicator of a child's normal healthy growth. But neither the mother nor the doctor can gauge that monthly growth by eye. Only about 1% of the world's children are visible and obviously malnourished. But more than a quarter of the world's children suffer from invisible malnutrition, which is barrier to prevention or cure. The average moderately malnourished child in the 6-24 month age range looks normal but is too small for his/her age, has lowered resistance to infection and therefore succumbs to illness. Regular monthly weighing and entering up of the results on the 'Growth to Health' card reveal the vital information and makes it visible to the mother, the one person who cares and can do something about it. The main value of such charts is that they are practical and powerful educational tools for teaching mothers how to protect their child's health growth.

2. *Breast Feeding*

For infants who are breastfed, the first six months after birth are often the healthiest time in their lives. Breast milk is nutritious and hygienic and also 'immunises' the child and helps to fight off infection. This knowledge must be communicated to every family. In addition, breast feeding usually delays the onset of menstruation and offers the mother a considerable degree of protection against another pregnancy. It is very important that the new born is put to breast immediately and fed colostrum.

3. *Oral Rehydration Therapy (ORT)*

This is a simple and inexpensive method of preventing and correcting the dehydration which is induced by diarrhoeal infections and which is one of the leading causes of deaths in children.

From the age of five or six months, breastmilk alone is not sufficient to meet the growing needs of the child. If supplementary feeding is not now introduced, then growth slows down, weight gain falters and resistance falls, so the child is pushed towards the edge of malnutrition and infection. If on the other hand, supplementary foods are started, then the risk of infection and malnutrition is almost as great, as the child comes into contact with unsafe water, contaminated food stuffs, unhygienic sanitation and uncontrolled infection. So the mother must be helped to wean her child safely. If however, diarrhoea does occur, two vital messages must be given to parents.

- (a) Continue feeding even when your child has diarrhoea.
- (b) Begin replacing fluid losses by oral rehydration treatment as soon as diarrhoea begins.

4. *Immunisation*

Immunisation against the six major communicable diseases of childhood—diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis and measles, should be given to every child before he/she is one year old.

These four strategies are low-cost, available, relevant and achieve rapid results.

Three more steps to promote child health are:

- i) Food supplements
- ii) Family spacing and

iii) Female education

i) *Food supplements:* One of the important facts about infant deaths is that babies with low birth weight account for a high percentage of death in the first year of life. It has been shown that birth weights can be raised by 300 gms through a daily supplement of 500 calories and 10 gms of protein for women in the last three months of pregnancy.

Women who weigh less than 90% of women's normal weight for height at the onset of pregnancy, or who have an upper arm circumference of less than 23.5 cm, or who are over 35 years old, or who have 4 or more pregnancies or who have previously given birth to low birth weight babies, or who are anaemic, are all women at risk and need food supplements to reduce the risk of low birth weight babies. If the supplementary feeding can continue after the birth, then the quality and quantity of breast milk can be maintained and thus give protection to the child in the vital months.

Finally, food supplements are also required for the child at the time of weaning. When weaning begins growth cannot be normal, resistance cannot be kept up and impairment of the child's development cannot be prevented unless food supplements are given.

The growing body of a young child needs twice as much protein three times as many calories per kilo of body weight, as an adult. And because the young child's stomach is smaller, feeding needs to be more frequent.

ii) *Family spacing:* Studies have shown that infant mortality rates for babies born within one year of a previous birth are between two to four times as high as for babies born after an interval of two years or more. 'Too many' can be almost as dangerous as 'too close', chances of survival for the first and second child are slightly higher than for the third child and significantly higher than for the fourth and fifth child in a family. Finally, births to women who are younger than 20 or older than 35 are also known to increase the risks to both mother and child. These risks to life and health, summarised by 'too close, too many, too old or too young', hold true for all income groups, though the increase in risk is much more in groups suffering poverty.

iii) *Female education:* For almost all children, the primary health care worker is the mother. For it is usually the mothers' level of education and access to information which will decide whether or not she will go for a tetanus shot, whether her child will be weaned at the right time, whether the best available foods will be cooked in the best possible way, whether water will be boiled and hands washed, whether bouts of diarrhoea will be treated by administering food and fluids, whether a child will be weighed and vaccinated, and whether there will be an adequate interval between births. Therefore, children of more educated mothers, in general have more chance of both survival and healthy growth. And a mother who is literate has both more opportunity to learn about new ideas and more confidence to put them into practice.

Thus, it can be seen that the four simple strategies and the three steps if followed, will promote the health and well being of child.

ARI is defined as any symptom pertaining to respiratory tract which include nose, throat, larynx, bronchi or bronchioles and related organs such as paranasals and the ear. The most common presenting symptoms of respiratory infection is cough while infection of nose, throat and ear present primarily as nasal discharge, sore throat and ear pain or discharge respectively. Although most children with cough have only a mild illness, some progress into pneumonia (moderate or severe ARI) which, when not treated, can lead to death. Therefore, if children with pneumonia could be identified and promptly treated, the deaths associated with ARI can be reduced.

Important components of ARI management would, therefore, consist of:

- * Discrimination of ARI according to severity.
- * Treatment of moderate and severe cases with antimicrobials.
- * Referral to medical/activities.

Discrimination of cases into mild, moderate and severe.

Most children with cough are not seriously ill and breathe normally. If a child with cough has moderate or severe ARI, he may have difficulty in breathing. The child is said to have moderate ARI if his breathing is faster than normal i.e. rate more than 50 per minute (fast breathing). The child with cough is said to have severe ARI if he has chest indrawing so that when he breaths in, his chest moves out as the lungs do not open normally.

Treatment of moderate and severe ARI with antimicrobials.

If a child has developed moderate or severe ARI, he should be treated with antimicrobials. While moderate ARI cases can be treated by frontline workers, patients with severe ARI should be treated at the Health centres/hospitals.

Medical Officer and his team should educate the community with regard to following:

1. If a child with a cough is breathing much more rapidly than normal then the child is at risk. It is essential to get the child to a clinic quickly when breathing of the baby is more than 50 times per minute.
2. A child with a cough or cold should be helped to eat and to drink plenty of liquids. A breastfed child with a cough or cold may be difficult to feed. But feeding helps both to fight the infection and to protect the child's growth. So it is important to persist in frequent attempts to give breastmilk. Often, clearing the child's blocked nose will help the child to suck. If a child cannot suck, it is best to squeeze out the breastmilk and feed the child from a clean cup.
3. A child with a cough or cold should be kept warm but not hot, and should breathe clean, non-smoky air.

Treatment at the Health Centre/Hospital

A child who is (1) not able to drink or has (2) chest indrawing should be referred by the health worker for admission to hospital because these children are more likely to have serious bacterial pneumonia and they are more likely to die than those children without chest indrawing. Evidence from some countries suggests that chest indrawing is a better or more reliable indicator of severity and need for hospital admission than tachypnoea or fever. Children with chest indrawing may need antimicrobials like gentamycin or cloxacillin etc. which are only available in the hospital. Some may also require oxygen. Before referring, the child should be given one dose of antimicrobial if available. A letter of reference should be given to the mother to take with her to the hospital or PHC.

In the PHC or hospital, assessment of patient is made by history and physical examination with the breathing rate and evidence of chest indrawing looked into in particular.

The management of patient with severe ARI has essentially two components:

- Antimicrobial therapy
- Supportive therapy.

Antimicrobial therapy

A child with cough and chest indrawing should be admitted to the hospital and should be given benzyl penicillin (Crystalline penicillin, penicillin G) 50,000 u/kg. body weight/dose intramuscularly every 6 hrs. If the child does not improve after 24 hours or if he becomes cyanosed or is unable to drink at any time, chloramphenicol 25 mg/kg/dose (maximum 1 gram per dose) intramuscularly every 6 hrs—should be given. When the child has improved (usually after 3-5 days), change should be made to oral chloramphenicol. This drug should be given for at least 10 days. If chloramphenicol is not available at the Primary Health Centre or hospital, benzyl penicillin plus an aminoglycoside such as gentamycin can be given.

Children who are identified, if at all, to have staphylococcal pneumonia, chloramphenicol or cloxacillin (or oxacillin) plus gentamycin can be given as treatment.

Supportive therapy

A child who is cyanosed or who has wheezing and a respiratory rate of 70/minute requires oxygen. Oxygen should be administered by intranasal catheter preferably using low-flow meters at the rate of 1 litre per minute. The catheter should be inserted to a depth equal to the distance between the tragus and lateral edge of nose. Humidification of the oxygen is desirable, but care must be taken that the water is changed every day and the catheter etc. cleaned twice a week to reduce the risk of bacterial contamination.

If the child is dehydrated and unable to drink, fluids should be given by means of intragastric tube. If the child is in shock, intravenous fluids should be given but care should be taken not to give too much fluid. These children can easily develop pulmonary edema and respiratory failure.

The severe ARI may often be associated with high fever (over 38°C). Paracetamol can be given orally (10-15 mg/kg) every 6 hours. Sponging with tepid or cold water is not very effective and therefore, should be discouraged.

In neonates and infants below 2 months of age, it may be difficult to make a diagnosis of severe ARI as these children may not have cough. Such babies should be treated as having pneumonia if any of the following are present:

- Respiratory rate over 60/minute.

- Chest indrawing or
- Grunting

In the hospital, these children should be given benzyl penicillin 50,000 u/kg intramuscularly 12 hourly for at least 5 days and either.

- Streptomycin 25 mg/kg 1M once a day
- Or Kanamycin 10 mg/kg 1M 12 hourly
- Or Gentamycin 2.5 mg/kg 1M 12 hourly.

If the baby is cyanosed, intranasal oxygen 0.5 litre/minute should be given.

HANDOUT 4.4.3 Integrated Child Development Services

This scheme was started on October 2, 1975, for children below the age of six years and for pregnant and nursing mothers residing in socially backward village, tribal areas and urban slums.

OBJECTIVES

1. To improve the nutritional and health status of children in the age group 0-6 years.
2. To lay the foundations for proper psychological, physical and social development of the child.
3. To reduce the incidence of mortality, morbidity, malnutrition and school drop outs.
4. To achieve effective coordination of policy and implementation amongst the various departments to promote child development; and
5. To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

Package of Services

1. Supplementary nutrition
2. Immunisation
3. Health check-up
4. Referral services
5. Treatment of minor illness.
6. Nutrition and health education to women.
7. Non-formal education to children in the age group 3-6 years.
8. Convergence of other supportive services like water supply, sanitation etc.

Beneficiaries and Services

Beneficiaries

1. Expectant and nursing mothers

Service

- i) Health check-up
- ii) Immunisation of expectant mothers against tetanus
- iii) Supplementary nutrition
- iv) Nutrition and health education

Beneficiaries

Service

2. Other women 15-45 years	Nutrition and health education
3. Children less than 1 year	i) Supplementary nutrition ii) Immunisation iii) Health check-up iv) Referral services.
4. Children 1 to less than 3 years	i) Supplementary nutrition ii) Immunisation iii) Health check-up iv) Referral services
5. Children from 1 to less than 5 years	i) Supplementary nutrition ii) Immunisation iii) Health check-up iv) Referral services v) Non-formal non-school education

The administrative unit for an ICDS project is the community development block in rural and tribal areas and a ward or a group of slums in urban areas. The anganwadi worker delivers the services of the anganwadi, with the support and supervision of C.D. workers and the Child Development Project Officer (CDPO). The CDPO is in-charge of the project. She guides and supervises the Anganwadi workers. She is the leader of the project. The medical officers, with female health supervisors and workers from the primary health centre form a team with the social welfare functionaries to implement ICDS.

Functional Responsibilities

The ICDS Scheme is a centrally sponsored scheme and is implemented through the State Government with 100 percent assistance from the central Government for inputs other than supplementary nutrition (the states have to provide funds for supplementary nutrition).

The Women's Welfare Department of the Ministry of Human Resources Development is the main department responsible for the programme with coordination and cooperation of several other ministries i.e. (i) information and broadcasting (ii) health and family welfare (iii) agriculture (iv) other food and civil supplies (v) education (vi) urban development (viii) energy.

Monitoring

Implementation of ICDS is closely monitored. The emphasis is on functional monitoring. Monitoring continues to evolve and improve the quantity and quality of the feedback and generate appropriate action at the earliest time. Like implementation, monitoring too done by the health and social welfare sectors i.e. the Central Cell at the All India Institute of Medical Sciences and the department of Women's Welfare respectively.

Independent evaluations have been done by the Planning Commission, the All India Institute of Medical Sciences, the National Institute of Public Cooperation and Child Development, Home Science Colleges and many academicians. These studies have found considerable improvement in child development indicator like prevalence of malnutrition, infant mortality, under five mortality, birth rate, immunisation and prophylaxis coverage etc.

The government of India have accorded high priority to programmes aimed at improving the child survival rate. The National Health Policy aims at universal immunization of new born children and expectant mothers with a view to provide protection against vaccine-preventable childhood diseases: Diphtheria, Whooping cough, Tetanus, Poliomyelitis, Tuberculosis and Measles. During the VII Five Year Plan (1985-90), over 82 million infants and expectant mothers are planned to be covered under the programme. It is a centrally sponsored scheme. A separate section has been set up to coordinate the programme, and also the various activities and components of the programme, such as, production and quality control vaccines, development of surveillance, training of personnel organisation of cold chain for storage and transport of vaccines and continual assessment by monitoring and evaluation.

Immunisation Schedule

Beneficiaries	Age	Vaccine	Number of Doses	Route of Administration
1. Infants	6 wks to 9 months	DPT	3	Intra-muscular
	6 wks to 9 months	Polio	3	Oral
	6 wks to 9 months	BCG	1*	Intra-dermal
	9 to 12 months	Measles	1	Subcutaneous
* For institutional deliveries BCG should be given at Birth.				
2. Children	16 to 24 months	DPT	1**	Intra-muscular
	16 to 24 months	Polio	1**	Oral
	**Booster dose.			
	5 to 6 years	DT	1£	Intra-muscular
	10 years	TT	1£	Intra-muscular
	16 years	TT	1£	Intra-muscular
3. Pregnant women	16 to 36 weeks	TT	1£	Intra-muscular
£ 2 doses, if not vaccinated previously.				

Note: Interval between 2 doses should not be less than one month.

Minor coughs, colds and mild fever are not a contra-indication tot vaccination.

While the vaccines are effective in protecting the children from serious diseases, they must however be given at the right age and the full course must be completed. The vaccines must also be handled carefully because they get damaged if not kept at +2 to +8 degrees centigrade from the time of manufacture to the point of use. The immunization schedule has been framed keeping in view the epidemiological pattern of the disease.

Points for Consideration

- Intervals between doses should not be less than one month.
- Minor cough, colds and mild fever, malnutrition and diarrhoea are not a contra-indication for vaccinations.
- Different vaccines can be given at the same sitting but the sites of injections should be different.

Contra-indication:

- High fever (over 101 degrees F)
- Acute illness
- History of convulsions or central nervous system disorders
- Acute tuberculosis
- Severe malnutrition

Reactions

Reactions after vaccination are generally mild and of short duration; such as:-

- mild fever
- local pain and swelling at the site of injection
- malaise, fretfulness
- Transient rash (after measles vaccine)
- A lump or papule in III or IV week after BCG.
- Abscess formation due to unsterilized needles.
- In rare cases, convulsions or collapse after DPT have been observed.

Cold Chain

This is a system of transportation and storing vaccine at recommended temperature from its manufacture to the point of use.

Vaccines are thermolabile and have defined life period and require special storage and transportation arrangements to retain their efficacy. Thus, cold chain comprises of three components: The cold chain equipment, transport and trained manpower. Without adequately trained and motivated personnel it is difficult to sustain the cold chain even when adequate facilities are available. Deficiency at any point in the cold chain can lead to a severe backlash which the programme can ill afford; as cases of occurrence of the diseases in reportedly vaccinated children can generate a lot of negative publicity. All vaccines retain their potency at temperatures between +2 to +3 degrees centigrade. This temperature must be maintained during transportation and storage at district and PHC stores. The risk of cold chain failure increases as the vaccine moves along the cold chain from the manufacturer to the mother or child receiving it.

The Government of India has initiated several programmes in nutrition on a national scale to

control/prevent major nutritional problems.

1. These programmes may be classified as:
 - a) Programmes aimed at overcoming specific deficiency diseases.
 - (i) National goitre control programme
 - (ii) Vitamin A prophylaxis programme
 - (iii) The iron and folate distribution programme.
 - b) Programmes designed to improve the overall nutritional status.
 - (i) Applied Nutrition Programme
 - (ii) Supplementary feeding programmes
 - (iii) Mid-day meal programme for school children.
 - c) Others
 - (i) Integrated Child Development Services Scheme.
 - (ii) India Population Project.
2. The National Goitre control programme is in operation since 1962. Iodised salt is sold at the same price as common salt in goitre-endemic areas. Government aims to reduce prevalence of goitre under the programme of 'Health for All by 2000 A.D.' Reduction of 50 percent of cases by 1985 and 95 per cent by 2000 A.D. are planned.
3. Vitamin A prophylaxis programme was launched by the Ministry of Health and Family Welfare to minimise blindness due to vitamin A deficiency. A large dose of vitamin A (66,000 mg) is given orally every 6 months to children between the ages 1 year to 6 years. The programme was started in 1970.
4. National Anaemia Prophyl axis Programme for the prevention of iron deficiency. The programme consists of distribution of iron and folic acid (folifar tablets) to pregnant women and young children. MCH Centres in urban areas and PHCs in rural areas are engaged in the implementation of this programme.

Folifar tablets containing 60 mg of elemental iron and 500mg of folic acid are given to pregnant women daily during the 100 days of pregnancy. It is also given to pre school children in lower doses.
5. Applied Nutrition Programme was launched by the Government in 1963 with aid from UNICEF, FAO and WHO for improving the nutrition of nursing and expectant mothers and children. The chief aim is to stimulate the production of protective foods such as eggs, fish, milk, vegetables and fruits and by means of health education to promote their consumption by mothers and children who are the vulnerable group from the nutrition standpoint. The programme has been developed to teach the village people how they can increase and improve their food supply with their own actions and efforts. It also trains various categories of personnel for the purpose.
6. *Supplementary feeding programmes.*

The special Nutrition Programme (SNP) was started in 1970 for the nutritional benefit of pre-school children (6 months to 6 years) pregnant women and nursing mothers, under the overall charge of the Ministry of Social Welfare. The beneficiaries are selected from the weaker

sections of the population.

7. The supplementary food supplies 300 calories and 10-12 g of protein per child per day. The mothers receive daily 500 calories and 25 g of protein. This supplement is provided to them for about 300 days in a year.
8. The Balwadi Nutrition Programme (BNP) which was started in 1970-71 is under the overall charge of the Dept. of Social Welfare. Balwadis were established in rural areas for providing preparatory education to children in the age group 3 to 6 years. The supplement supplies 300 calories and 10 g. of protein per child per day.
9. Mid-day Meal Programme has been in operation since 1962-63. It was first implemented in Tamil Nadu in 1957. The two basic objectives of the programmes are improvement in the nutritional status of children and imparting nutrition education.

There is a strong component of nutrition in the Integrated Child Development Services Scheme (I.C.D.S.) and India Population Project. In the above programme, a number of agencies are involved—Depts of Social Welfare, Education, Rural Development and Health and Family Welfare and also FAO, UNICEF, CARE, WHO and the World Food Programme.

HANDOUT 4.6.2	Nutritional Deficiency Disorders among Pre-school Children
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Malnutrition is the most widespread disorder in the pre-school child, specially 1 to 3 years of age. It is the most important single cause of childhood morbidity and mortality. It also leads to permanent impairment of physical and mental growth.

The clinical picture is the result both of shortage of food and of particular nutritional deficiencies.

There are two groups of nutritional diseases:

1. Protein and energy deficiency, resulting in Kwashiorkor and Marasmus.
2. Vitamin and mineral deficiencies producing specific clinical syndromes, e.g., Vitamin A deficiency, Iron deficiency, anaemia, rickets, etc.

PROTEIN AND ENERGY DEFICIENCY

No other disease of childhood compares in importance with Protein Energy Malnutrition (PEM) in the field of nutrition or public health in general. It can be defined as range of pathological conditions arising from a deficiency of protein and energy and is commonly associated with infections. PEM results from the interaction of several factors, among which two are more or less directly responsible for the disease and act synergistically. They are:-

- a) A quantitatively insufficient and qualitatively inadequate dietary intake.
- b) Infective processes such as gastro-intestinal disorders and respiratory infections. In fact, it is a vicious circle, infection contributing to infection.

CLASSIFICATION

The point at which malnutrition begins is usually defined as a reduction in body weight below 80 percent of the Harvard 50th percentile. The Nutrition sub-committee of the Indian Academy of

Paediatrics has classified malnutrition as below:

- a) First degree malnutrition—weight between 80 and 71 percent of the Harvard standard.
- b) Second degree malnutrition—weight between 70 and 61 percent of the Harvard standard.
- c) Third degree malnutrition—weight below 60 percent of the Harvard standard.

CLINICAL FEATURES

When the nutritional deficiency is mild to moderate and prolonged, the body of the growing child adapts by reducing its rate of growth. When the energy and protein restriction is great, the body is forced to consume its own tissues for metabolic purposes. This is manifested by less weight for age. When this process is prolonged, the picture is of Marasmus and Kwashiorkor. These are two extreme manifestations, of malnutrition.

Features of Malnutrition

Essential Features	Marasmus	Kwashiorkor
1. Oedema	none	legs or face or generalised.
2. Wasting	marked (all skin and bone)	less obvious sometimes fat.
3. Muscle Wasting	Severe	sometimes.
4. Growth retardation in terms of body weight	Severe	less than marasmus
5. Mental changes	Usually not present	usually present
Variable features		
1. Appetite	Usually good often	Usually poor.
2. Diarrhoea	often	often
3. Skin changes	Usually none	often diffuse pigmentation
4. Hair changes	texture may be modified	often sparse, silky, reddish.
5. Moon face	not present	often
6. Hepatic enlargement	none present	present

Early detection and treatment

First indication of PEM is lower weight for age. The most practical method is by maintaining the Road to Health Card which will indicate that the child is not gaining weight. This is the stage when preventive measures should be taken.

Mild to moderate cases of PEM require the (a) administration of adequate diet and (b) control of infectious diseases.

The aim of adequate diet is to supply enough energy and proteins. It is generally agreed that 1250-1500 calories and 3 to 4 gm of good quality protein per kg. of body weight per day will cover the child's needs. Mild to moderate cases can be treated successfully at domicilliary level.

Treatment of Infections

Early diagnosis and treatment of infectious diseases, specially diarrhoea with Oral Rehydration Therapy (ORT) and respiratory diseases should be undertaken. Prevention can be done by measures directed to pregnant and lactating mothers, starting weaning early in infancy and providing proper diet to these children.

2. Anaemia

Most malnourished children are anaemic because of:

- Deficiency of haemoglobin — lack of iron intake.
- Lack of red cells.
- loss of blood by bleeding.

Of those the first is most common and is seen with malnutrition of all grades.

In children with Anaemia, it is necessary to look for

- Nutritional deficiencies
- Tuberculosis
- Loss of blood in stools or other evidence of bleeding
- Signs of infestation : Hookworm or trichuriasis
- Malaria
- Enlargement of liver, spleen and lymph nodes.

If no response is seen to iron and feeding, further investigation is required.

Government issue tablets with 20 mg elemental iron and 0.5 mg folic acid.

Dosage for children:

Age	Prophylactic	Therapeutic
upto 2 years	1/4 tab B.D.	1/4 tab T.D.S.
2—5 years	1/2 tab B.D.	1 tab B.D.
over 5 years	1/2 tab B.D.	1 tab T.D.S.

3. Deficiencies of Vitamins A,B,C,D.

Vitamin A deficiency:

Common cause of blindness in children (refer national programme for the Prevention of Visual Impairment and Control of Blindness).

Vitamin B Complex Deficiency:

Vit. B or Thiamine deficiency causes beri-beri, rare in India. Seen in population who eat polished rice. May occur in infants of mothers deficient in thiamine during pregnancy.

Common features to observe are :

- Heart failure with breathlessness, rapid heart and swelling of hands and feet, may resemble pneumonia—onset rapid.

b. Lesser degrees have muscle tenderness, pins and needles and loss of peripheral reflexes.

The Treatment consists of 50 mg of B¹ by injection or by mouth; then 10 mg by mouth for 2 months give pulses and vegetables.

Riboflavine Deficiency causes cracking at angle of mouth; lips red, swollen and cracked tongue bright red, smooth and painful.

Nicotinic Acid Deficiency causes pellagra the skin on exposed areas – hands and feet is dry and cracked and itches. Tongue is fissured and sore.

Treatment consists of giving Vitamin B complex. Food must include vegetables and nuts and milk which is rich in Vitamin B.

Vitamin C Deficiency:

Not common in India. Absence causes scurvy.

Signs: bruising of skin, bleeding soft gums. Bone tenderness due to subperiosteal bleeding. Child refuses to walk and cries if limbs are touched near joints Vitamin C is present in milk, green vegetables, but is destroyed by boiling or cooking.

Deficiency avoided by eating fruits (oranges, limes etc) and green vegetables.

Treatment : Vitamin C by mouth 200 mg.

Vitamin D Deficiency

Obtained from food or by sunlight on the skin necessary for bone formation: shortage affects the deposition of calcium at the growing zones and in the shafts of long bones. Bones fail to grow in length and osteoid tissue accumulates at epiphysis.

Signs of deficiency – Rickets – most likely to occur during rapid growth.

- a. Enlargement of epiphysis best seen in ribs and at wrists, less easily in ankles.
- b. Bending of bones due to loss of rigidity. Bending is the result of posture; if the child is mostly sitting; the tibia bows outward if the child is walking. The ribs being soft, may bend to form a depression on both sides of the chest (Harrison's sulcus), particularly if there is upper respiratory tract obstruction.
- c. Muscles soft, flabby and weak.
- d. Some children have convulsions or muscles irritability (tetany) associated with low blood calcium.

Treatment: Calcium lactate and 1000 units vitamin D daily by mouth for 3 months unless urgency, then single large dose of 600,000 units by mouth or by injection.

Fluorosis

Fluorine is essential for the normal mineralization of bones, and formation of dental enamel. About 96 per cent of the fluoride in the body is found in bones and teeth.

Sources

- i) *Drinking water :* The main source of fluoride to man is drinking water. The fluoride content of

drinking water is about 0.5 mg/litre but in fluorosis – endemic areas, the natural waters have been found to contain as much as 3-12 mg of fluorides per litre.

- ii) *Foods* : Fluorides occur in traces in many foods but some foods such as sea fish, cheese and tea are rich in fluoride.

Requirements

Since drinking water is the main source of fluorine to man, a concentration of 0.5 to 0.8 mg/litre in water is considered a safe limit in India.

Fluorine in Human Health

Fluorine is often called a two-edged sword, ingestion of large amounts is associated with dental and skeletal fluorosis and inadequate amounts with dental caries

1. *Dental fluorosis*: in young children the disease affects only the teeth, this is known as "Dental fluorosis", the teeth lose their shiny appearance & chalk while patches develop on them.
2. *Skeleton fluorosis* : In older people the disease affects the bones, tendons and ligaments, this is known as "skeleton fluorosis". This is followed by pain and stiffness of the back and later of joints of both limbs and limitation of neck movements. Radiological changes are quite characteristic. Skeletal fluorosis has been reported to be a public health problem in several districts of Haryana, AP, Karnataka, Kerala, Punjab, Rajasthan and Trivandrum.
3. Genu Valgum has been observed to be seen among people whose staple diet is 'sorghum', it is characterised by Osteoporosis of lower limbs.
4. *Dental Caries* : Fluoride levels below 0.5 mg/litre are usually associated with high prevalence of dental caries.

Prevention and Control: The normal content of fluoride in water should be below 1 mg/litre. On fluoridation of water may be done by 'Nalgonda Technique' both for community and domestic purpose.

HANDOUT 4.7.1 School Health Programme

School health is an important branch of community health. According to modern concepts, school health service is an economical and powerful means of raising community health in future generations. It has now developed into the broader concept of provision of comprehensive care of the child throughout the school years.

Objectives:

1. promotion of positive health
2. prevention of diseases
3. early diagnosis, treatment and follow-up of defects
4. awakening health consciousness in children through health education
5. provision of healthful environment

Aspects of School Health Service

Health Appraisal: It should cover not only the students but also the teachers and other school personnel. Health appraisal consists of periodic medical examinations and observation of children by the class teacher.

Periodic medical appraisal: It should be done at the time of entry and every 4 years. The initial examination should be thorough and should include a careful history and physical examination of the child, with test for vision, hearing and speech. A routine examination of blood and urine should be carried out.

The teacher should help by recording the medical history, quarterly recording of height and weight, annual testing of vision and preparing children for the examination. Daily inspection for noting any illness should be carried out by the teacher who should be trained for the purpose.

Remedial Measures and Follow-up: Medical examination should be followed by appropriate treatment and follow-up later at the school itself or at the PHCs.

Prevention of Communicable Diseases: A well planned immunisation programme should be drawn up as per immunisation schedule prescribed. Children at school entry (5-6 years) should be given Inj. DT (booster dose) and Typhoid vaccine two doses at an interval of 1-2 months, At 10 and 16 years Inj. Tetanus Toxoid and Typhoid vaccine (2 doses) should be repeated. A record of immunisation should be maintained as part of the health-record and should be given to the pupil when he leaves school.

Healthful School Environment: The school building, site and equipment are part of the environment in which the child grows and develops. A healthful school environment is therefore necessary for the best emotional, social and physical health of the child. Drinking water and basic toilet facilities should be arranged.

Nutritional Service: The diet of the school child should contain all the nutrients in proper proportion, adequate for the maintenance of optimum health. For poor children, schools should have some arrangement to provide mid-day meals on a 'no profit, no loss basis'. At least one – third of the daily protein requirement of the child should be provided. Wherever land is available, school gardens should be developed under the Applied Nutrition Programme. Also, specific nutrients may be provided for some nutrient disorders of the locality e.g. endemic goitre, nutritional anaemia, etc.

First Aid and Emergency Care: Teachers should receive training in providing first aid and emergency care. A First Aid post may be provided as per regulations for St. John Ambulance Association of India.

Mental Health: The school teacher has both a positive and preventive role – he should be concerned with helping all children attain mental health, so that they may develop into mature, responsible and well adjusted adults.

Dental Health: Dental caries and periodontal disease are the two common dental problems in India. At least once a year, dental examination should be done.

Eye & Ear Health Services: Basic eye and ear health services should be provided in schools. Schools should be responsible for the early detection of refractive errors, treatment of squint and amblyopia and detection and treatment of eye infections, such as trachoma, as well as early detection and treatment of ear discharge leading to deafness.

Health Education: The goal of health education should be to bring about desirable changes in health knowledge, attitudes and practices of school children. Health education should be done by the teacher. She/He should cover knowledge on personal hygiene, environmental health and family life nutrition, environmental health and family life education.

School Health Records: The purpose of maintaining school health records is to have cumulative information on the health aspects of school children in order to give continuing intelligent health supervision.

HANDOUT 5.1.1 National Malaria Eradication Programme

National Malaria Eradication Programme is the world's biggest health programme against a single communicable disease. The programme was first launched in 1958 and by 1965, the annual incidence of Malaria was drastically reduced from 75 million to about 0.1 million.

Resurgence of malaria necessitated renewed vigorous anti-malarial activities and the programme was modified. The Modified Plan of operation was implemented from 1st April, 1977. Since then, there has been a gradual downward trend in malaria positive incidence.

Modified Plan of Operation 1977

1. Objectives:

- a) elimination of deaths from malaria
- b) reduction in the malaria morbidity and
- c) maintenance of the gains achieved earlier by reducing transmission wherever possible.

Flexibility in the policies according to the epidemiological situation and local conditions is an essential feature in this programme.

2. Strategy

The earlier phasing of the antimalarial units as attack, consolidation and maintenance phase areas was abolished and reclassification of Areas according to Annual Parasite Incidence (AP) was undertaken

$$\text{undertaken (API)} = \frac{\text{Confirmed cases during one year}}{\text{Population under surveillance}} \times 1000$$

3. Areas with API more than 2

- a) Spraying – Regular insecticidal spray with 2 rounds of DDT. If the vector is refractory to DDT, 3 rounds of HCH are recommended. If refractory to both DDT and HCH, 3 rounds of malathion spray at intervals of 6 weeks. Dosage of DDT, HCH and malathion are 1.0, 0.2 and 2.0 g per sq. meter surface respectively.
- b) Entomological assessment is done by teams by carrying out susceptibility tests to suggest appropriate insecticides.
- c) Surveillance – collection and examination of blood smears. Active and passive surveillance carried out fortnightly.
- d) Treatment of cases – presumptive and radical treatment.

4. Areas with API less than 2

- a) Spraying – not under regular spraying, 'focal spraying' only when *P. falciparum* cases are detected during surveillance.
- b) Surveillance – no regular spraying; so active and passive surveillance operations to be carried out vigorously every fortnight.
- c) Treatment all detected cases should receive radical treatment as prescribed.

- d) Follow-up — followup blood smears to be collected from all positive cases on completion of radical treatment and thereafter at monthly intervals.
- e) Epidemiological investigation of all malaria positive cases are to be investigated. This may include mass surveys.

5. Drug Distribution Centres and Fever Treatment Depots

A wide network of Drug Distribution Centres (to dispense the antimalarial tablets) and Fever Treatment Centres (collect blood slides in addition to distribution of antimalarial tablets). These centres are manned by voluntary workers.

6. Urban Areas — Intensive antilarval measures and drug treatment are undertaken in the urban areas. Spraying is confined only to the peripheral belt of houses to a depth of a mile.

7. P. falciparum Containment — An additional component to prevent or contain or control the sprad of P. falciparum malaria, has been introduced from October 1977 with SIDA assistance.

8. Health Education — Emphasis has been given to health education of the public to enlist their cooperation in malaria control activities.

9. Reorganisation — Antimalaria Units have been reorganised in conformity with the geographic boundaries of the district making the District Health Officer (DHO) responsible for the programme. The existing Unit Officers have been designated as District Malaria Officers (DMOs) and are posted at district headquarters and are assisted by Assistant Malaria Officers. Laboratory services are decentralised; laboratory technicians are posted at each PHC. Entomological teams have been attached to all 72 zones in the country. The Chief Medical Officers and the MOs (PHCs) have to play a key role in the execution of the programme. The programme is now horizontal and integrated with the general health services from the district level to the periphery.

10. Treatment

a) Presumptive Treatment

All fever cases (current or with history) are assumed to be due to malaria and MPW administers a *single dose* Tablet Chloroquine (4-Amino-quinoline) Tablet-chloroquine (150 mg. base)

Age of years	Dose
0 — 1	75 mg (1/2 tab.)
1 — 4	150 mg (1 tab.)
4 — 8	300 mg (2 tab.)
8 — 14	450 mg (3 tab.)
14 and above	600 mg (4 tab.)

Caution: Chloroquine should not be administered in empty stomach.

Side effects: As the recommended dosages under NMFP the toxicity is minimal. Some side effects are as follows:

- gastric irritation

- Nausea, vomiting
- Headache
- Pruritus
- Blurring of vision, sometime diplopia.

Prolonged use in large doses (300 mg–600 mg base daily) for weeks or months may produce

- Occular damage e.g. neuro-retinitis
- Pigmentation of nail bed, skin and palate

The above symptoms usually disappear soon after withdraw of chloroquine.

More severe side-effects may also develop

- If given intravenous rapidly can cause an abrupt fall in blood pressure which may be fatal.

b) Radical Treatment

In areas of *P. vivax* and *P. Malaria* and mixed infection (P.V. & P.M.) a single dose of chloroquine will not provide a radical cure. To prevent the relapse, Primaquine (8-Aminoquinoline) must be given to deal with the persistent liver stages of these parasites. Primaquine is administered by a MPW as radical treatment only if the blood smear is found positive for malaria parasite. The age-wise dosage schedule used by field staff under NMEP is given below:—

Tablet Primaquine (2.5 mg base)

Age in years	Dose
0 – 1	Nil
1 – 4	2.5 mg (1 tab.) Plus tab. Chloroquine 150 mg (single dose) on 1st day 2nd-5th day Primaquine only.
4 – 8	5 mg (2 tab.) Plus tab. Chloroquine 300 mg (single dose) on 1st day 2nd-5th day Primaquine only.
8 – 14	10 mg (4 tab.) Plus tab. Chloroquine 450 mg. (single dose) 2nd-5th day Primaquine only
14 and above	15 mg (6 tab.) Plus tab. Chloroquine 600 mg (single dose) 2nd-5th day Primaquine only.

Caution:—

1. Primaquine should not be administered to infants and pregnant woman.
2. Drug should not be given in empty stomach.

Side effects

At recommended dosages no symptoms of toxicity are likely. Sometimes Anorexia, nausea, cynosis, epigastric distress, abdominal pain and cramps and passage of dark colour urine are reported. Occasionally vomiting, itching, vague chest pain and weakness. In addition there may be striking effects of bone marrow depression marked by leukopenia, anaemia, methaemoglobinaemia.

ANTIMALARIA DRUG USED IN AREAS WHERE P. FALCIPARUM IS SENSITIVE TO CHLOROQUINE

1. Presumptive Treatment

By Active case detection (ACD), Passive Case Detection (PCD) and Drug Distribution Centre (DDC)/Fever Treatment Depots (FTD) will continue as per the dose already in use (i.e 600 mg. base for adult)

ii) Radical Treatment of P. Falciparum cases

Adults: 600 mg Chloroquine Plus 45 mg. Primaquine (single dose) children should be given proportionately lesser dose. Primaquine should not be given to infants and pregnant women.

AREAS WITH ESTABLISHED CHLOROQUINE RESISTANT IN P. FALCIPARUM

a) Presumptive Treatment (all fever cases current or with history)

- | | | |
|----|---------------------------------|--|
| 1. | By Active case detection (ACD) | Amodiaquine 600 mg (adult single dose) |
| 2. | By Passive case detection (PCD) | 1000 mg of Sulphalane and 50 mg of Pyrimethamine (single adult dose) |
| 3. | By DDC/FTD | Amodiaquine 600 mg (adult single dose) |

b) Radical Treatment (P. falciparum)

The following combination of drugs used for treatment in Chloroquine resistant P. falciparum areas.

Tablet Sulphalene	1000 mg	Single adult dose
Pyrimethamine Plus	50 mg	
Primaquine	45 mg	

Note:

Full dose is to be given at a time after meals. Children 0–1 year, 1–4, 4–8, and 8–14 will receive 1/8, 1/4, 1/2 and 3/4 of the adult dose respectively.

Chemo-Prophylaxis

Under NMEP no regular Chemo-Prophylaxis is recommended except in the following situations:

In Pregnancy and infant

Malaria infection (P. vivex) in pregnant women and infants radical treatment with Primaquine is not recommended. These cases are put under weekly administration or Chloroquine in the following doses:—

Infant (0–1 year)

Chloroquine 37.5 mg (1/4 tab.) weekly once till the child attain 1 year of age then radical treatment is given with Primaquine.

Pregnant Women

Chloroquine 300 mg (2 tabs.) weekly once till the delivery and after that about 45 days or Haemoglobin rises more than 10 gm% when radical treatment with Primaquine should be given

1. Agent Factors

- a) Agent –
 - P. Vivax, P. falciparum and P. malariae
 - 70% infections due to P. vivax
 - 25–30% due P. falciparum
 - 4–8% due to mixed infection
 - 1% due to P. malariae
- b) Life history
 - Malarial parasite: 2 cycles of development
 - i) Sexual cycle – Mosquito (Definitive host)
 - ii) Asexual cycle – Man (Intermediate host)
 - Asexual cycle has 4 Phases : – Pre erythrocytic phase
 - Erythrocytic phase
 - Gametogony phase
 - Extraerythrocytic phase.
- c) Reservoir of infection – Man – must harbour both the sexes of mature and viable gametocytes in his blood in sufficient density to infect mosquitoes.
- d) Period of communicability

2. Host Factors

- a) Age – all ages.
- b) Sex – Males more frequently exposed
- c) Race – Individuals with sickle cell trait have a milder illness.
- d) Social & Economic factors – underdeveloped countries ill-ventilated and ill-lighted houses.
- e) Movement of population.
- f) Human Habits – sleeping outdoors
- g) Immunity – man has no natural immunity.

3. Environmental Factors

- a) Season – July to November
- b) Temperature – 20 – 30 deg C optimum temperature for the development of the malaria parasite in insect vector.
- c) humidity – 60% of humidity necessary for mosquitoes to live their normal span of life.
- d) Rainfall – Rain provides opportunities for breeding of mosquitoes.

- e) Altitude — Mosquitoes are not found at altitudes above 2000 — 2500 metres.
- f) Man — made malaria — Burrow pits, garden pools, irrigation channels, etc.

4. Vectors of Malaria

Important ones are: *An. culicifacies* in rural areas and *An. stephensi* in urban areas

- a) Density — "Critical Density" below which transmission cannot be maintained.
- b) Life span — Vector mosquito must live for at least 10-12 days after an infective blood meal.
- c) Choice of Host — Some mosquitoes prefer human blood; some animal blood.
- d) Resting habits — After a blood meal most mosquitoes rest indoors (endophily)
- e) Breeding habits — Some breed in moving waters; some in still waters.
- f) Vectoral capacity —
- g) Resistance to insecticides — knowledge necessary for choice of insecticides.

5. Mode of Transmission

- a) Vector Transmission
- b) Direct Transmission — by hypodermic intramuscular & intravenous injections of blood or plasma, e.g. blood transfusion, drug addiction;
- c) Congenital malaria — may occur but is rare
- d) Incubation period — not less than 10 days.

6. Measurement of Malaria

A. Prevalence

- a) Spleen Rate — Percentage of children between 2—10 yrs. showing enlargement of spleen.
- b) Average enlarged spleen — denotes the average size of the enlarged spleen.
- c) Parasite rate — Percentage of children between 2—10 yrs. showing malaria parasites in their blood streams.
- d) Parasite density index — indicates the average degree of parasitaemia in a sample of a well-defined group of the population. Only positive slides are included in the denominator.
- e) Infant Parasite Rate — Percentage of infants showing Malaria parasites in their blood films. Most sensitive index of recent transmission of malaria in a locality. If the infant parasite rate is zero for 3 consecutive years in a locality it is regarded as absence of malaria transmission.
- f) Proportional Case Rate — this is used since it is difficult to determine the morbidity rate, except in conditions when the diagnosis and reporting is carried to perfection. It is the number of cases diagnosed as clinical malaria for every 100 patients attending the hospitals and dispensaries.

B. Incidence – the parameters are:

- a) Annual Parasite Index (API)

$$\text{API} = \frac{\text{Confirmed cases during one year}}{\text{Population under surveillance}} \times 1000$$

- b) Annual Blood Examination Rate (ABER)

$$\text{ABER} = \frac{\text{Number of slides examined}}{\text{Population}} \times 100$$

7. Vector Indices

Some of the important vector indices are:

- a) Human Blood Index – Proportion of freshly – fed female Anopheline mosquitoes whose stomach contains human blood. Indicates the degree of anthrophilism.
- b) Sporozoite Rate – Percentage of female anophelene with sporozoites in their salivary glands.
- c) Mosquito Density – Number of mosquitoes per man – hour catch.
- d) Man-Biting Rate – Average incidence of anophelene bites per day per person.
- e) Inoculation Rate: The man – biting rate multiplied by the infective sporozoite rate is called the Inoculation Rate

8. Antimalarial Measures (WHO Expert Committee 1979)

A. Measures to be applied by the individual:

- a) Prevention of man/vector contact – using repellants, protective clothing, bed nets, screening of houses.
- b) Destruction of adult mosquitoes – use of domestic sprays including aerosols.
- c) Destruction of mosquito larvae – peridomestic sanitation, intermittent drying of water containers.
- d) Source reduction of mosquitoes – filling small scale drainage, and other forms of water management.
- e) Measures against malaria parasite – chemoprophylaxis and chemotherapy.

B. Measures to be applied by the Community.

- a) Prevention of man/vector contact – site selection and screening of houses.
- b) Destruction of adult mosquitoes – residual spraying or space spraying of insecticides.
- c) Destruction of mosquito larvae – using larvicides (chemical and biological)
- d) Source reduction – prevention of man-made malaria, environmental sanitation, water management, drainage schemes.
- e) Measure against malaria parasite – presumptive and radical treatment, mass drug administration.

HANDOUT 5.2.1 National Filaria Control Programme

Filariasis is one of the major public health problems in the country. All the States/Union Territories except Jammu and Kashmir, Himachal Pradesh, Delhi, Chandigarh, Punjab, Haryana, Meghalaya, Arunachal Pradesh, Sikkim, Rajasthan, Tripura, Mizoram and Manipur are endemic for filariasis. Present estimates indicate about 342 million population is living in known endemic areas, out of which about 82 million are in urban areas and the rest in rural areas.

The National Filaria Control Programme was launched in 1955. Since 1978 due to similarity of anti-larval operations, it has been merged with the urban malaria scheme.

Activities

1. Delimitation of the problem in hitherto unsurveyed areas.
2. Control in urban areas through—
 - a) recurrent anti-larval measures
 - b) anti-parasite measures
3. Control in rural areas through detection and treatment of microfilaria carriers and/or cases on an experimental basis.

Present Set-up

In endemic States and Union Territories

Control Units	—	198
Survey Units	—	27
Clinics	—	158
Rural Filaria	—	2
Control projects		
At Central level	—	National Institute of Communicable Diseases.
At State level	—	Headquarters Bureau

Regional Filaria Training Centres at Ernakulam, Allahabad and Nagpur.

Achievement

300 districts are situated in endemic areas. 238 of these have been surveyed for delimitation of filarial problem and 173 have been detected to be endemic for filariasis. 27 survey units are carrying out delimitation survey in equal number of districts. It is observed that 94 percent of the towns where control measures are in operation for more than five years have shown marked reduction in microfilaria rate.

1. Agent factors

a) Two types of infection, viz.,

- i) *W. bancrofti* — responsible for 98% of the infection
- ii) *B. malayi* — localised and restricted distribution in the central part of Kerala along the coast; smaller pockets of infection exist in Andhra Pradesh, Tamil Nadu, Orissa and Madhya Pradesh.

b) Periodicity

The parasites display a nocturnal periodicity, i.e., they appear in large numbers at night and are either absent or scarce during the day.

c) Life cycle

Man is the definitive host and mosquito the intermediate host. The adult parasites are usually found in the lymphatic system of man. The females are viviparous. They give birth to microfilariae which find their way into the blood circulation.

The mosquito cycle begins when the microfilariae are picked up by the vector mosquito during feeding. Three stages of development take place in the mosquito. When the larvae migrate to the proboscis of the mosquito, it is ready to be transmitted to a new host and the mosquito is infective.

d) Reservoir or Source of Infection.

A person with circulating microfilariae in the blood.

2. Host Factors

- a) Age — all ages
- b) Sex — does not influence the infection rate
- c) Density of infection — not known.
- d) Migration of people has led to extension of filariasis from one place to another.
- e) Immunity — man may develop resistance to infection. The basis of this resistance is not known.
- f) Social factors — Urbanisation, industrialisation, migration of people and sleeping habits.

3. Environmental factors

- a) Climate — important factor. It influences the breeding of mosquitoes, their longevity and also determines the development of the parasite in the insect vector.
- b) Drainage — Filariasis associated with bad drainage. The vector breeds profusely in polluted water.
- c) Town Planning — Inadequate sewage disposal and lack of town planning. The common breeding places are cesspools, soakage pits, ill maintained drains, septic tanks etc.

4. Vectors

The main vectors are (a) *C. fatigans* in India and (b) *Mansonia* mosquitoes in Malaysia (c) *Aedes* — in other countries.

5. Mode of Transmission

Filariasis is transmitted by the bite of infected mosquitoes. The parasite enters the capillaries and then reaches the lymphatic system.

6. Incubation Period

12–18 months

7. Clinical Manifestations

- a) Stage of Invasion — the infective larvae gain entry into the human host and start undergoing further development
Diagnosis — eosinophilia, lymphadenopathy and positive intradermal test plus history of residence in endemic area.
- b) Symptomless or carrier phase — No clinical manifestations. The *Mf* carriers are detected by night blood examination.
- c) Stages of acute manifestation: fever, lymphangitis, lymphadenitis, lymphoedema of various parts of the body.
- d) Stages of chronic manifestations: elephantiasis of the genitals, legs or arms, hydrocele, chyluria, etc.

8. Filaria Survey

A filaria survey comprises the following elements:

- a) Blood Survey — (i) Thick blood smears taken between 8.30 p.m. and 12 midnight. (ii) Diethyl Carbamazine (DEC) provocation test.
- b) Skin and serological tests — not very useful.
- c) Clinical manifestations of the disease
- d) Xenodiagnosis — The mosquitoes are allowed to feed on the patient and then dissected 2 weeks later.
- e) Entomological Surveys — Comprises of general mosquito collection, dissection of female vector species, study of the extent and type of breeding places, etc. The data are assembled, analysed and the results are expressed in certain filarial indices.

9. Filarial Indices.

- a) Parasitological Indices.
 - (i) Microfilaria rate — percentage of persons showing *mf.* in their peripheral blood.
 - (ii) Filarial Disease Rate — percentage of persons showing visible manifestations of filarial disease in the sample population.
 - (iii) Filarial endemicity rate — percentage of persons showing microfilaria in the blood, or disease manifestation or both.

- (iv) Microfilarial density — number of mf. per unit volume (20 Cmm) of blood in individuals.
- (v) Average Infestation rate — average number of mf. per positive slide, each slide being made of 20 Cmm of blood.

b) Vector Indices

- (i) Vector density per 10 man-hour catch.
- (ii) percentage of mosquitoes positive for all stages of development.
- (iii) percentage of mosquitoes positive for infective stage.
- (iv) types of larval breeding places.

10. Control Measures

- a) Treatment of cases. Diethyl carbomazine (Hetrazan). The recommended dosage in the Indian programme is 6 mg DEC per Kg body weight daily for 12 doses to be completed in 2 weeks (i.e. 6 days per week). In endemic areas treatment must be repeated at specified intervals usually every 2 hours.

DEC may produce severe side reactions:—

- (i) those due to the drug itself e.g. headache, nausea vomiting, dizziness etc.
- (ii) allergic reactions due to destruction of microfilariae and adult worms, eg. fever, local inflammations around dead worms, pruritus etc.

b) Antimosquito measures—

Ideal method — elimination of breeding places by providing an underground waste water disposal system.

- (i) Antilarval measures — recurrent anti-larval measures in endemic urban areas to reduce the transmission of infection by reducing the vector population.

The larvicides are —

- Mosquito larvicidal oil (MLO)
- Pyrosine oil — E
- Organophosphorus larvicides e.g. Abate, Batex. Removal of pista plant

Minor engineering measures — filling up of ditches, drainage of stagnant water, adequate maintenance of septic tanks and soakage pits.

- (ii) Anti-Adult measures —

The vector mosquitoes have become resistant to DDT, BHC, etc. Pyrethrum is costly and has no residual action.

Personal prophylaxis — by using mosquito nets. Screening of houses.

Health education for cooperation of the community —

- in night blood surveys
- in spraying of homes.
- in taking complete treatment
- in using mosquito nets and screening of houses
- in improving the environmental sanitation

HANDOUT 5.2.3 Japanese Encephalitis

Encephalitis or fever with stupor or coma is a serious disease. It is caused by a virus which is spread from birds and small animals to man through the bite of the Culex mosquito that breeds in dirty water.

SYMPTOMS

The onset is sudden with

- High fever
- Headache
- Stiff neck
- Drowsiness
- Delirium — the patient does not know what he is doing.
- Stiffness and tremor of the muscles
- The patient goes into a coma or unconsciousness and may even die.

PREVENTION

- Avoid dirty water pools to prevent mosquito breeding.
- Use mosquito net for personal protection particularly in the area where such cases are reported.
- Report any such case of fever with stupor to nearest Health Authority/Worker. Also report them if any insanitary condition for breeding mosquitoes prevail.
- Get the whole house including kitchen and all other covered areas sprayed with DDT where such measures are adopted by the Health Authorities.

THEME & MESSAGE

If any person in your area develops fever with stupor, coma or unconsciousness —

- Send the patient immediately to the PHC or Hospitals.
- Report the case immediately to the MO PHC.
- Keep your environment clean.
- Co-operate with Health Staff to get your House sprayed with insecticides.

HANDOUT 5.3.1 The National Leprosy Eradication Programme

The Government of India in collaboration with the state Governments established the National Leprosy Control Programme in 1955 and it was centrally sponsored from 1969-70.

1. Major components

- a) Establishment of Leprosy Control Units (LCU) in hyper endemic areas.
- b) Establishment of Survey — Education — Treatment (SET) Centres in moderately endemic areas.

- c) Involvement of voluntary agencies.

2. Objectives

- a) Early diagnosis
- b) Treatment
- c) Health Education.

3. The Programme organisation

- a) Leprosy Control Units (LCU) established in areas with prevalence more than 1%. Each unit covers 3 lakh population. The staffing pattern is:
Medical Officer – 1
Paramedical workers – 15
- b) Survey–Education – Treatment (SET) Centres established in areas with prevalence rate of leprosy between 0.5%-1.0% covers about 25,000 population with one paramedical worker.
- c) Urban Leprosy Centres.
- d) Temporary Hospitalisation wards.
- e) Reconstructive Surgery Units.
- f) Central – Leprosy Cell of DGHS.
- g) State – State Leprosy Officer.
- h) District – District Leprosy Officer.

4. Present Status (1986-87)

Leprosy Control Units – 449

Urban Leprosy Centres – 715

Survey – Education – Treatment centres – 7027

Temporary Hospitalisation wards – 266

District Leprosy Officer – 197

Leprosy Training Centres – 45

HANDOUT 5.3.2 Leprosy

1. Introduction

Leprosy is a major health and socio-economic problem in India. The total number of cases on the basis of 1981 census was estimated to be around 4 million, based on the average prevalence of 5-6 per 1000 population. Every year about 3 lakh 'new' cases are detected of which about 60 percent are actually new and 40 percent are old undetected cases. About 20-25 percent of these cases are of the infectious type. About 15 per cent of cases are among children below the age of 14 years. It has been estimated that India accounts for about one-third of the leprosy cases in the world.

2. Agent factors

- a) Agent – Leprosy is caused by *M. Leprae*

- b) Source of infection — Man — active cases of leprosy.
- c) Portal of exit — from the nose, upper respiratory tract and skin.
- d) Attack rate — 6.8 per 1000 among contacts as compared to 0.8 per 1000 without contact.

3. Host factors

- a) Age — any age. A high prevalence of disease among children means the disease is active and spreading.
- b) Sex — more commonly seen in men than in women in proportion of 2:1
- c) Race — in all human races.
- d) Immunity — Leprosy is the best example of a disease which has the spectrum ranging from complete absence of resistance by the host to effective immunity.
- e) Genetic factors — have a role in leprosy.
- f) Blood groups — no definite conclusion.
- g) Migration — the trend towards migration and urbanisation has greatly increased the spread of disease.

4. Environmental factors

Poor environmental surroundings, sub-standard housing and sanitation. Lower socio-economic groups.

5. Mode of Transmission

- a) Contact transmission — direct or indirect contact with families.
- b) Droplet infection — very common.
- c) Other routes — Lepa bacilli have been found in human milk.

6. Incubation period

2 — 5 years

7. Classification

Indian Classification —

- a) Intermediate type — early cases with one or two vague hypopigmented macules and definite sensory impairment.
- b) Tuberculoid type — 1-3 well defined lesions which may be flat or raised, hypopigmented or erythematous and are anaesthetic. Lesions are bacteriologically negative.
- c) Borderline type — 4 or more lesions which may be flat or raised, well or ill-defined, hypopigmented or erythematous and show sensory impairment or loss. Bacteriological positivity is variable.
- d) Lepromatous type — diffuse infiltration or numerous flat or raised, poorly defined, shiny, smooth, symmetrically distributed lesions. Bacteriologically positive.
- e) Pure Neuritic type — cases with nerve involvement but do not show any lesion in the skin. Bacteriologically negative.

8. Diagnosis

- a) Clinical Examination – for cardinal signs of leprosy. At least one cardinal sign must be present. Loss of sensation must be tested for heat, cold, pain and light touch. Nerves – Ulnar (near the median epicondyle) involved. Greater auricular lateral popliteal and dorsal branch of the radial.
- b) Bacteriological examination –
 - (i) Skin – Material from the skin is obtained from an active lesion and also from both the earlobes by the 'slit and scrape' method.
 - (ii) Nasal smears or blows can be prepared from early morning mucus material or an alternative is to use a nasal mucosal scraper. The smear is immediately fixed by lightly passing over a spirit lamp and stained with Ziehl-Neelson method.
- c) Histamine Test.

0.1 ml of 1/1000 solution of histamine phosphate or chlorhydrate is injected intradermally into hypopigmented patches or in areas of anaesthesia. In leprosy, flare response is lost.
- d) Biopsy: when the examinations stated above do not yield a diagnosis, a biopsy is required.
- e) Foot-pad culture – inoculate the material into the foot pads of mice and demonstrate the multiplication of *M. Leprae*.
- f) Lepromin Test –

Inject intradermally 0.1 ml of lepra antigen or lepromin in the forearm of the patient and examine the reaction at the end of 48 hours and 21 days. 2 types of reaction.

 - (i) Early reaction – inflammatory response develops within 24-48 hours and remains for 3-5 days. Redness and induration at the site of inoculation. If the red area has more than 10 mm diameter at the end of 48 hours the test is considered positive.
 - (ii) Delayed or late reaction – The reaction develops late becoming apparent in 7-10 days following the injection and reaching its maximum within third to fourth week. The test is read at 21 days. If there is a nodule more than 5 mm in diameter, the reaction is positive.

9. Bacteriological index

Only objective way of assessing the benefit of treatment. It should be done every 6 months on all positive cases.

Smears are first graded as follows:

Negative – no bacilli found in 100 fields.

One plus (+) – one or less than one in each microscopic field.

Two plus (2+) – Bacilli found in all fields.

Three plus (3+) – Many bacilli found in all fields

Add G to the entry if globi are present. Bacteriological index is calculated by totalling the number of + given to each smear and dividing this number by the number of smears collected. A minimum of 7 sites should be examined. Smears from 4 skin lesions, one nasal swab, and smears from both ear lobes.

10. Morphological Index

It is the percentage of solid staining bacilli. The criteria for calling the bacilli solid rods are:

- a) uniform staining of the entire organism
- b) length 5 times that of the width.
- c) round ends
- d) length 5 times
- e) parallel sides.

If the index rises after having fallen, it indicates that the patient has not taken or absorbed his drugs or that the bacilli have become resistant.

11. Methods of Leprosy Control

- a) Survey
- b) Early detection of cases
- c) Chemotherapy
- d) Follow-up of cases
- e) Selective Isolation
- f) Prevention of contact
- g) Chemoprophylaxis
- h) Immunoprophylaxis
- i) Prevention of disabilities rehabilitation.
- j) Health education.
- h) Social measures

a) Survey

The size of the problem can be seen by random sample surveys. The survey should bring out not only the prevalence of leprosy, but also the age and sex distribution of cases and the various forms of leprosy. A rough estimate of the prevalence can be determined by examining all school age children; the total prevalence will be about 4 times the number of cases found.

b) Early detection of cases

Case finding is important because quite often patients do not know they have the disease. Some patients are afraid to disclose themselves. The current recommendation is to involve the primary health workers (health guides multipurpose workers) in case detection with the active participation of the community. These workers have to be actively trained to make a tentative diagnosis of leprosy. The diagnosis should be confirmed by laboratory methods.

- (i) Contact survey — In areas where the prevalence of leprosy is low (less than one case per 1000 population), the technique of choice is examination of all contacts.
- (ii) Group surveys — When the prevalence is about one per 1000 or higher, additional case finding methods should be employed e.g. surveys in schools, slums in urban areas, army, labour, industrial areas etc. for all types of skin diseases.

- (iii) Mass surveys — Total population surveys for examination of each and every individual is recommended in hyperendemic i.e. in areas where leprosy is about 10 or more per 1000 population.

Case detection in urban areas may be difficult. Therefore, techniques employed are (i) repeated annual examination of school children (ii) examination of contacts (iii) surveys of families living in slums.

- (iv) Contact surveillance of households with
- a lepromatous case should be maintained for minimum of 10 years.
 - a non-lepromatous case should be maintained for 5 years.

C) Chemotherapy

Anti-leprosy drugs —

- i) Dapsone — Till recently dapsone was the only drug available for treatment of leprosy.
Advantages — cheap, effective, given orally, it is completely absorbed from the gut, fairly well tolerated.
Disadvantage — The above treatment is required to be prolonged for many years hence patient dropout.
- ii) Clofazimine — both anti-leprosy and anti-inflammatory Dose 50 mg. daily.
- iii) Rifampicin (RMP) — only drug that is highly bactericidal against *M. Leprae*.
In a single dose of 600 mg. 99.9% of leprosy bacilli are killed in 3–7 days. It is effective when given at monthly intervals. An essential drug in the chemotherapy of leprosy.
- iv) Ethionamide and Prothionamide: More expensive and more toxic than dapsone. However, these two drugs remain the only alternatives to clofazimine in patients requiring triple drug therapy and who will not accept clofazimine. The dose is 5–10 mg./Kg of body weight. The acceptability of these drugs is not yet established.

Recommended Treatment Regimens (followed under NLEP)

(i) MULTI-DRUG TREATMENT REGIMENS:

i) Multibacillary cases:

- (1) Two weeks intensive treatment at the clinic with daily doses of:

	15 Yrs.	10-14 Yrs.	6-9 Yrs.
Rifampicin	600 mg	450 mg	300 mg
Clofazimine	100 mg	50 mg	50 mg
Dapsone	100 mg	50 mg	25 mg

- (2) Continuation phase of multibacillary treatment regimen:

(a) Once monthly Doses for 24 months at the clinic:

Rifampicin	600 mg	450 mg	300 mg
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Clofazimine	300 mg	150 mg	100 mg
Dapsone	100 mg	50 mg	25 mg

(b) **Daily Domiciliary Doses for 24 months:**

Clofazimine	50 mg (daily)	50 mg (alternate days)	50 mg (twice-weekly)
Dapsone	100 mg	50 mg	25 mg

ii) **Paucibacillary cases:**

(a) **Once monthly Doses for 6 months at the clinic:**

	15 Yrs+	10-14 Yrs	6-9 Yrs	1-5 Yrs
Rifampicin	600 mg	450 mg	300 mg	150 mg
Dapsone	100 mg	50 mg	25 mg	10 mg

(b) **Daily Domiciliary Doses:**

Dapsone	100 mg	50 mg	25 mg	10 mg
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(ii) **Monotherapy**

Dapsone	100 mg	50 mg	25 mg	10 mg (Daily dose)
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D) Criteria for discharge and surveillance

(I) **CRITERIA FOR DISCHARGE**

Multibacillary Leprosy

A multibacillary patient who is clinically inactive and bacteriologically negative at the commencement of multidrug therapy, should continue treatment for 2 years (24 monthly supervised doses within 36 months). Thereafter treatment should be discontinued provided the patient continues to remain clinically inactive and bacteriologically negative at the end of this period.

Multibacillary smear positive patients should continue treatment until they become clinically inactive and bacteriological negative, or for a minimum period of 2 years, whichever, is later. If after treatment for more than 36 months, the bacterial count remains the same, or increases, the patient should be properly examined again clinically and bacteriologically for deciding the future line of treatment.

Paucibacillary Leprosy

Paucibacillary patients should continue treatment till 6 supervised monthly doses have been administered if treatment is interrupted, the regimen should be recommended where it was left of to complete 6 doses within 9 months.

If the lesions show extension or new lesions appear at the end of the prescribed course of treatment, the same schedule must be continued for a further period of six months to complete 1 year, provided the classification is reviewed and found correct. Patients refractory after 1 year of treatment should be referred to a specialist for evaluation and advice.

II. SURVEILLANCE

Surveillance after completion of chemotherapy as indicated below is essential for detection of relapses as well as the causes for relapse.

Multibacillary patients should be examined clinically and bacteriologically at least once every 12 months, for a minimum period of 5 years, after completion of treatment while paucibacillary patients require to be examined clinically at least once every 12 months for a minimum period of 2 years after completing treatment.

E) Prevention of disabilities

Prevent physical deformities which occur in 20-25 percent of cases. With the prevention and treatment of disabilities, physiotherapy and reconstructive surgery, physical rehabilitation has become a reality.

F) Health education

Should be directed to the patient and his family and the general public. Need for regular and complete treatment repeated examination of contacts, prevention of disabilities, protection of children and family planning – preferably sterilisation. Emphasis in education should be on the following:

- (i) Leprosy – a disease like other diseases
- (ii) Not a hereditary disease
- (iii) All cases are not infectious
- (iv) Children should be segregated from infectious parents.
- (v) Leprosy is curable.
- (vi) Early diagnosis and treatment are important.
- (vii) Eight percent of the deformities are due to neglect.
- (viii) The patient needs sympathy and kindness

G) Social Measures

If there is any stigma with the leprosy patient in the family or community, the same may be studied. Family and community may be educated accordingly.

Social factors which may come on the way of regular treatment should also be explored and adequate counselling may be done to overcome the same.

H) Immunoprophylaxis

No specific vaccine against leprosy.

HANDOUT 5.4.1 The National Tuberculosis Control Programme

This is a Centrally Sponsored Scheme with 50% per cent assistance from the Central Government to the States and 100% to U.Ts. The implementation of the scheme is the responsibility of the State Government. The TB Programme has been included in the 20 Point Programme.

TB is a major health problem. 9-10 million cases suffer from radiologically active TB out of which 2.2 to 2.5 million are sputum positive and infectious.

Long Term Objectives

To reduce the problem of TB in the community sufficiently quickly to the level where it ceases to be a public health problem.

Main Activities

- a) Early detection and treatment of all TB patients out of the symptomatics attending the Health and Medical Institutions; giving priority to sputum positive cases.
- b) BCG vaccination of susceptible population – under EPI Programme.
- c) Research activities – N.T.I. under D.G.H.S. is engaged in important epidemiological, sociological, bacteriological and operation research connected with the programme and provide suitable technical guidance for improvement of the programme.

The services are offered by the State Governments from all health institutions (integrated programme) urban and rural.

Organisation:

A District Tuberculosis Programme (DTP) consists of one District Tuberculosis Centre (DTC) and on an average 50 peripheral health institutions, comprising of PHCs, general hospitals, rural dispensaries etc.

District Tuberculosis Officer	1
Lab. Technician	1
Treatment Organiser	1
X-ray Technician	1
Statistical Assistant	1

The District TB Officer is directly responsible for the DTP.

The District Tuberculosis Programme (DTP)

The DTP is the basic unit of the National Tuberculosis Programme. It caters to the needs of an entire district.

An average district (population 1.5 million) is expected to have about 5000 sputum positive cases. The functions of the District TB Centre are to plan, organise, implement and supervise the DTP in the entire district.

Activities are –

- a) Case finding – undertaken by all PBCs and other general institutions in the daily out-patients. Patients with symptoms suggestive of TB are offered sputum microscopy. All sputum positive cases are put under chemotherapy. Repeated sputum positive symptomatic patients referred for x-ray examination, wherever it is available and radiologically active TB patients are put under treatment.
- b) Treatment is free and is offered on domiciliary basis.
- c) BCG vaccination included in EPI, Multi-purpose workers to immunise all infants before they are one year old.
- d) Recording and Reporting – Reports on case finding and treatment activities are submitted to District TB Centre once in a month. District TB Centre registers all cases in District TB Case Index. District TB Officer submits quarterly reports on case-finding, treatment, supervision and position of the key staff/equipments to the State Health Authorities and NTI Bangalore. On receipt of the quarterly reports, NTI scrutinize/analyse the report and give suggestion for corrective measures to be taken on various deficiencies to the concerned district TB Officer and State Health Authorities.

HANDOUT 5.4.2 Natural History of TB

1. Agent Factors

- a) Agent – Mycobacterium tuberculosis
- b) Source of infection
 - (i) Human – most important source
 - (ii) Bovine – not a problem in India
- c) Infective material – commonest source is the sputum.
- d) Communicability – as long as bacilli are excreted by host. The infectiousness is rapidly reduced by chemo-therapy.

2. Host Factors

- a) Age – Any age, but in India more in the elder age group.
- b) Sex – More prevalent among males over 40 years.
- c) Race – affects all races.
- d) Heredity – Not hereditary
- e) Nutrition – Studies have shown that diet had no discernible influence on the recovery of patients.
- f) Immunity – Man has no inherited immunity. It is acquired as a result of natural infection or BCG vaccination.

3. Social Factors

This is a social disease. Social factors are poor quality of life, viz. overcrowding, substandard housing, ignorance, low level of education, poor sanitation, poverty, large families etc.

4. Mode of Transmission

Mainly by droplet infection and droplet nuclei generated by an 'open' case.

5. Incubation Period:

The period of time from infection to onset of TB may be months or years. The risk of infection and disease it contacts is closely related to the closeness of contact, extent of the disease, sputum positivity of the source case, and the host-parasite relationship.

6. Control of TB

- a) Early detection of cases.
- b) Chemotherapy
- c) BCG Vaccine
- d) Surveillance

7. Detection of Cases

Identification of individuals spreading the infection.

Case finding tools –

- (a) Sputum examination – examination of two consecutive specimens (e.g. on-the-spot and overnight sputum) of patients with the following symptoms.
 - (i) cough more than 2 weeks duration
 - (ii) chest pain
 - (iii) haemoptysis/spitting of blood
- (b) X-ray examination of the chest – expensive and more sensitive but more specific like sputum examination.
- (c) Tuberculin testing – has little value for case finding.

8. Chemotherapy

- a) Regimens of Treatment

Standard Regimens –

a) Daily regimens–

In rural areas where medical supervision is not readily at hand, daily oral regimens are ideally suitable.

No. Daily oral regimens

- 1. INH + Thiacetazone
- 2. INH + Ethambutol

For seriously ill & sputum positive TB patients daily Streptomycin – 0.75 gm may be added in one of the above mentioned regimens for initial 2 months period.

N.B. INH + PAS regimen have been discontinued under the programme.

INH (300 mg) + Thiacetazone (150 mg) given together in a single dose is most frequently used. It is inexpensive, easy to administer & convenient to patient.

In case of toxicity (severe skin eruptions) Thiacetazone may be replaced by Ethambutol.

b) Bi-weekly or Intermittent regimens — preferably for sputum positive cases.

Streptomycin	0.75 gm.
INH	600 or 700 mg and
Pyridoxine	10 mg.

Streptomycin should be cautiously used in elderly patients of 40 years and above and the patient having kidney diseases. Similarly Ethambutol should be cautiously used in patients having ocular diseases and in children.

- c) *Duration of Treatment* — Minimum period of treatment is 12 months, optimum is 18 months and treatment beyond 2 years do not have extra advantage.
- d) *Short Course Chemotherapy* — There are two recommended regimens under the programme. These regimens have two phases, intensive phase of first two months and continuation phase of 4-6 months:—

Regimens (A)

By-weekly intermittent supervised regimen. Total duration of treatment is only 6 months. In the first two months (intensive phase) patient is given Streptomycin (0.75 gm) INH (600 mg), Rifampicin (600 mg) twice a week for four months.

Patient has to report to the health institution and all the drugs are consumed by the patient under the supervision of Doctor/health staff. In case of Streptomycin (1.5 gm) may be substituted.

Regimen (B)

Initial intensive phase of four drugs — Streptomycin (0.75 gm), INH (300 mg), Rifampicin (450 mg) and Pyrazinamide (1.5 gm) given daily for two months followed by daily administration of INH (300 mg) and Thiacetazone (150 mg) for a period of six months. Total duration of treatment is eight months.

Whenever patient cannot tolerate Thiacetazone it may be replaced by Ethambutol (800 mg) daily. This regimen is self-administered by the patient at their homes (domiciliary).

9. BCG Vaccination

Aim — to induce a benign, artificial primary infection which will stimulate an acquired resistance to possible subsequent infection.

The Vaccine — consists of living attenuated bovine strain of tubercle bacilli.

Dosage — 0.1 ml. intradermally

Administration — Intradermally with a special tuberculin syringe and a 1 cm steel 26 gauge needle.

10. Chemoprophylaxis

The 1974 Expert Committee on TB emphasised that preventive treatment is irrational even for special risk groups. In this regard BCR has priority over chemoprophylaxy.

11. Surveillance

Two aspects:

- a) Surveillance of annual infection rates
- b) Surveillance of control measures applied such as BCG vaccination and chemotherapy.

12. Role of Hospitals

Main indications

- a) emergencies such as massive haemoptysis and spontaneous pneumothorax.
- b) surgical treatment
- c) management of serious types of tuberculosis such as meningeal tuberculosis.
- d) Social indications – no one to look after the patient.

13. Drug Resistance

- a) All drugs used in the treatment of TB tend to produce resistant strains.
 - (i) Primary or permanent resistance
 - (ii) Secondary or posttreatment resistance.
- b) Prevention of drug resistance – Since incomplete, inadequate and irregular treatment is the main cause of drug resistance, this can be prevented by –
 - i) treatment with two or more drugs in combination.
 - ii) using drugs to which the bacteria are sensitive
 - iii) ensuring that the treatment is complete, adequate and regular.

14. Health Education

It is also an important aspect of the programme. More stress is to be given on health education of the community to educate them about various aspects of TB disease for taking timely action in prevention and treatment of TB disease. It should be impressed upon them that TB is not a dangerous disease now, provided it is treated timely for the full prescribed period.

The Government of India launched the fight against blindness as a National Programme in 1976. The Programme has been included in the 20 Point Programme.

PROBLEM OF BLINDNESS

The problem of blindness is complex because of its gigantic size, multiple causes, shortage of trained Ophthalmic personnel and rural-urban imbalance of scarce resources. Lack of knowledge on the part of people towards self efforts to attain & maintain eye health also adds to the problems.

According to a Sample Survey undertaken by ICMR in 1971-73 India has 9 million persons e.g. 1.4% of the population who can not see well at 6 meter distance and another 45 million people suffer from visual impairment. This Survey assessed the main causes of blindness as under:-

Cataract	55%
Trachoma	20%
Small pox (old cases)	3%
Malnutrition	2%
Injuries	1.2%
Glaucoma	0.5%
Other causes	18%

STRATEGY

1. Health education about eye care through all media of mass communication with particular emphasis on ocular health in children & other vulnerable groups.
2. To augment ophthalmic services so that relief can be given to the community in the shortest possible time.
3. To simultaneously establish a permanent infrastructure for community oriented eye health care.

THE GOAL

To achieve reduction in the incidence of Blindness from 1.4% to 0.3% by 2000 A.D.

PLAN OF ACTION

1. Intensification of educational efforts on eye health care through mass communication and extension education methods.
2. Extension of eye care services through Mobile Units to restore sight and relieve eye ailments by adopting 'Eye Camp approach' and enlisting participation of voluntary organisations.

3. Establishment of permanent facilities for eye health care as a part of general health services. Peripheral sector includes development of primary eye-care services involving Block level PHC and its subactivities.

Intermediate sector includes development of diagnostic and treatment facilities at district and sub-divisional levels. Central sector include development of sub-speciality services, basic and applied research and man-power development.

ACHIEVEMENTS

The following infrastructure has been developed by 1988-89

Strengthening of PHCs	4000
Central Mobile Units	80
Strengthening of Distt. Hospitals	404
Upgradation of Deptt. of Ophth. in Medical Colleges	60
Establishment of Regional Instts.	9
Ophth. Asstt. Training Centres	37
Setting up of Distt. Mobile Units	150
Ophthalmic Cells in States	18
Eye Banks	80(including 8 in Vol. Sector)

TRAINING PROGRAMMES

Each PHC and Distt. Hospital are to be provided with one Ophthalmic Asstt. 37 Training Institutes have been established to conduct 2 year courses for this paramedical category of personnel. PHC Medical Officers and in-service Ophthalmic Asstts. are to undergo for a short course training as a part of continuing education.

HEALTH EDUCATION

Basic concept of eye care introduced in school curriculum, mass media are being utilised for education.

RESEARCH PROGRAMME

Dr. Rajendra Prashad Centre for Ophthalmic Sciences, New Delhi, is the major centre for research. Nine other Regional Institute have been identified for research and training.

PERFORMANCE

Performance of Cataract operations being monitored against the given targets for each State and U.T. and at the Central level by the Ophthalmic Cell under Dte. General of Health Services.

PARTICIPATION OF VOLUNTARY ORGANISATIONS

Voluntary Organisations are being assisted for eye-camps at the rate of Rs. 60/- per operation to the maximum of Rs. 12,000/- per camp and at the rate of Rs. 40/- when they utilise Govt. Mobile Unit alongwith its personnel.

MONITORING AND EVALUATION

Central Ophthalmic Cell has been proposed at the Central Govt. level. 18 State Ophthalmic Cells are monitoring the various aspects of the programme.

Performance of Cataract Operations

<i>Year</i>	<i>Targets</i>	<i>Performance</i>	<i>Achievements</i>
1981-82	Not fixed	5.50 lakh	
1982-83	13.36 lakh	9.04 lakh	68%
1983-84	12.58 lakh	10.69 lakh	85%
1984-85	12.78 lakh	11.34 lakh	89%
1985-86	13.84 lakh	12.18 lakh	88%
1986-87	13.83 lakh	12.08 lakh	87%
1987-88	12.25 lakh	11.93 lakh	97%
1988-89	12.25 lakh	8.56 lakh	Provisional till March, 1989.

I. TRACHOMA

1. **Introduction**—A chronic inflammatory disease of the eye affecting the conjunctiva and cornea. The disease has a chronic evolution and is characterised by development of follicles, papillary hyperplasia, pannus (corneal Vascularisation) and scar formation, leading sometimes to blindness. The blinding lesions are entropion, trichiasis and corneal ulcers. For purposes of diagnosis in the field, cases must satisfy at least two of the following criteria:
 - a) Follicles on the upper tarsal conjunctiva.
 - b) Limbal follicles or their sequelae, Herbert's pits
 - c) Typical conjunctival scarring (trichiasis/entropion)
 - d) Vascular pannus, mostly marked at the superior limbus.
2. **Public Health Importance**—Trachoma and associated infections are the most important cause of preventable blindness in the world. Trachoma is estimated to affect approximately 500 million people, most of them in rural communities of the developing world. At least 2 million blind from trachoma, and a much larger number, suffer partial loss of vision.
3. **Geographic Distribution**—(a) World-wide distribution, mainly in North Africa, the Middle East and certain regions in Africa, southern Asia and pockets in Latin America, Australia and the Pacific Islands.
(b) India—Trachoma is one of the principal causes of impairment of vision leading to blindness in India. There are about 9 million blind and 45 million who are visually handicapped. Trachoma is responsible for 5 per cent of visual impairment and blindness in India.
4. **Agent Factors**—(a) Agent. *Chlamydia trachomatis* is the specific agent, but other organisms often contribute to the disease process. (b) Reservoir—children with active disease are the chief reservoir of infection in the community. (c) Period of communicability:—disease of low infectivity—not communicable after complete cicatrization.
5. **Host Factors** (a) Age:—mostly children by the age of 1-2 years.
(b) Sex:—Prevalence equal in both sexes younger age groups. In older age groups, females affected more than males.
(c) Community—higher in Muslims.
(d) Secondary infection—Secondary bacterial infection may facilitate the onset of trachoma, aggravate its course and/or prevent it from healing.
(e) Predisposing factors: Direct sunlight, dust, smoke and irritants.
6. **Environmental factors** (a) Season April to May and July-September. (b) Quality of life—poor quality of life. (c) Flies—Increase in fly index has a close relationship with peak seasons of Trachoma (d) Customs—The custom of applying 'kajal' is a positive risk factor.

7. Mode of Transmission—direct or indirect contact with ocular discharges of infected persons or fomites. Eye-seeking flies play some role in spreading the disease.
8. Incubation Period, 5-12 days.

Control of Trachoma:

- a) Assessment of the problem.
- b) *Chemotherapy*. 1% ophthalmic ointment or oily suspension of tetracyclines.
 - (i) Mass treatment. A prevalence of more than 5 percent and moderate trachoma in children under 10 years is an indication for mass treatment. Continuous treatment, for 6 weeks followed by intermittent family-based self-treatment. The intermittent therapy consists of twice daily application of tetracycline for 5 consecutive days each month, and for 6 months each year.
 - (ii) Selective Treatment. In communities with low or medium prevalence, the principles of treatment are the same, but the treatment should be applied to individuals by case-finding rather than by community-wide coverage.
- c) *Surgical correction*. Individuals with lid deformities (trichiasis/entropion) should have surgical procedures and follow-up.
- d) *Surveillance*. Once control of blinding trachoma has been achieved, provision must be made to maintain surveillance.
- e) *Health Education*. The mothers of young children should be the target for education. Measures of personal and community hygiene should be incorporated in programmes of health education. If levels of sanitation and quality of life are not improved, reinfection occurs.
- f) *Evaluation*. Must be evaluated at frequent intervals.

II. VITAMIN A DEFICIENCY

1. *Clinical Criteria*: Vit. A deficiency most commonly affects the eyes, the clinical conditions being night blindness and xerophthalmia.
 - a) Night blindness (nyctalopia) or inability to see in dim light is the earliest symptom of Vit. A deficiency. In this condition, the rod cells of the retina are affected; resulting in impairment of adaptation to darkness.
 - b) Xerophthalmia: Literally means 'dry eye'. The following eye changes should be considered as Xerophthalmia:
 - (i) Conjunctival xerosis: the conjunctiva instead of looking clear and transparent, appears muddy and wrinkled. It becomes dry and unwettable. First clinical sign of Vit. A deficiency.
 - (ii) Bitot's spots: These are greyish, triangular foamy, rough and raised patches on the bulbar conjunctiva. They are frequently bilateral. When associated with conjunctival xerosis, they are indicative of Vit. A deficiency.

- (iii) Corneal xerosis: This usually follows conjunctival xerosis. The corneal surface also becomes dry and hazy, like ground glass.
 - (iv) Corneal ulceration with xerosis: If the ulcer progresses, there may be perforation with iris prolapse.
 - (v) Keratomalacia: It consists of softening of the entire thickness of a part or whole of the cornea. The process is a rapid one. If not promptly treated, it may lead to necrosis and destruction of the eye ball resulting in blindness. Keratomalacia is often associated with protein-energy malnutrition.
2. *Biochemical criteria:* Plasma vitamin A levels of less than 10 mcg/100 ml in more than 5 percent of the population at risk (0-5 years) has been suggested for the community diagnosis of xerophthalmia and Vit. A deficiency.
- Rose Bengal Test: Conjunctival xerosis is frequently used as an early clinical indicator of Vit. A deficiency in young children. Its diagnosis, however, is not always easy. Use of one percent of the dye, 'Rose Bengal' is a reliable and objective test for the presence of conjunctival xerosis. The xerotic area is stained a deep pink which is easily recognised. This test detects several cases of xerosis which are missed by clinical examination.
3. *Prevention:* (a) Most rational approach for the control and prevention of Vitamin A deficiency is the improvement of diet. Regular intake of green leafy vegetables, carrots, mangoes, papaya, liver, egg yolk, butter, cheese and fish can improve the serum vit. A level.
- (b) Administration of 200,000 I.U. of retinyl palmitate in oil by mouth every 6 months to children between the ages of 1-6 years has been found effective in reducing the incidence of ocular signs of Vitamin A deficiency.

HANDOUT 5.6.1

National Diarrhoeal Diseases Control Programme

This programme was started during the Sixth Plan to bring down diarrhoea related mortality through promotion of Oral Rehydration Therapy. Since diarrhoea is caused by a number of organisms, there is no effective vaccine available at present. Drugs have very little role to play. If environmental sanitation standard is low, it is not possible to control diarrhoeal morbidity though mortality can be reduced through the use of Oral Rehydration Therapy.

Keeping in view the magnitude of the problem, an intensified programme has been launched during the seventh plan to reduce diarrhoeal mortality by 50% by the year 1990. This is proposed to be achieved through short term and long term objectives.

OBJECTIVES

1. **Short term objectives:**
 - a) Training of medical and paramedical personnel
 - b) Streamlining production and distribution of ORS.
 - c) Education of the mothers and the community in the use of oral rehydration therapy.

formulation of proper strategies towards continuous breast feeding and weaning practices.

- d) Operation/health services research for identification of a suitable strategy for implementation.

2. Long term objectives

- a) Provision of safe drinking water supply.
- b) Improvement of sewage disposal system.
- c) Improvement of general environmental sanitation.
- d) Health and nutrition education of the community.

PLAN OF ACTION

- a) Availability of oral rehydration salt.
- b) Training programmes.
- c) Health education
- d) Research

ORAL REHYDRATION THERAPY

The oral rehydration therapy is envisaged in 3 stages. The first stage is managing diarrhoeal situation with home made/home available liquids for prevention of dehydration.

In the second stage, oral rehydration salt is to be encouraged to combat dehydration.

In the third stage, the primary health centres and hospitals will treat with I.V. therapy the severe cases of diarrhoea having dehydration.

TRAINING PROGRAMMES

It is proposed to include diarrhoeal management with ORS in the course curricula of multi-purpose workers, supervisors, health guides, medical and nursing students and paediatricians. The medical and paramedical personnel involved at present in primary health care at district hospital/PHCs/sub-centres down to village level have also to be trained. Private practitioners are also to be trained through IMA. The Medical Council of India and the Nursing Council have also been approached to include the same in the curriculum for various personnel. Ministry of Education and NCERT are to be approached for training of teachers in the subject.

HEALTH EDUCATION

Health Education of the Community for the prevention of diarrhoea is to be done through mass media. Voluntary organisations have also to be approached to support the effort for popularising ORS.

RESEARCH

It is proposed to encourage research activities in relation to the isolation of aetiological agents, epidemiological features, preventive and control measures and drug response.

A massive beginning is being made to propagate the simple diarrhoeal diseases control measures throughout the length and breadth of the country. An amount of Rs. 10 lakhs has been released to the Department of Audio-Visual Publicity for preparation of suitable publicity material.

HANDOUT 5.6.2

Oral Rehydration Therapy

I. Preparation of Oral Rehydration Solution at Home (Sugar salt solution)

Steps:

1. Take half a litre of clean drinking water.
2. Add 2 finger pinch of salt. Stir it.
3. Taste a spoonful of the solution. It should not be more salty than tears.
4. Add a large fistful of sugar/khandsari or a tiny piece of gur.
5. Stir the mixture with a clean spoon till the sugar/gur has dissolved.
6. Give 1/4–1/2 cup (50-100ml) of this mixture after every loose motion to a child less than 2 years of age and twice the amount in children above 2 years of age. Give small sips of the drink. If the child vomits, repeat it.

II. Preparation of Oral Rehydration Solution with the ORS packet.

1. Composition of ORS packet:

Sodium Chloride	3.5 g
Sodium Bicarbonate	2.5 g
Potassium Chloride	1.5 g
Glucose (dextrose)	20.0 g

2. Take one litre of clean drinking water.
3. Pour the water and the powder from the packet into a large clean vessel.
4. Stir it with a clean spoon, till it dissolves. There will be about 5 glasses of the drink.
5. Give 1/4–1/2 cup (50-100 ml.) after every loose motion to a child less than 2 years of age and twice the amount in children above 2 years. Keep the rest of the drink covered. Make fresh drink every day. If child vomits wait for 10 minutes, then given it in small amounts sip by sip.

- III. Coconut water, rice water, dal water, mashed ripe banana, weak tea may also be given during diarrhoea.

DIAGNOSIS AND TREATMENT OF DEHYDRATION

This chart shows the signs of different stages of dehydration. If the child has 2 or more signs from a column, follow the treatment suggested at the bottom of that column.

REMEMBER

Important: If the child has blood or mucous in the stool, and fever, suspect dysentery and treat with antimicrobials

Even 1 or 2 really large loose motions could very quickly lead to severe dehydration.

	SIGNS OF DEHYDRATION	NO SIGNS OF DEHYDRATION	SOME SIGNS OF DEHYDRATION	SEVERE DEHYDRATION
ASK	Diarrhoea	Less than 4 loose motions per day	4-10 loose motions per day	More than 10 loose motions per day
	Vomiting	None or small amount	Some	Very frequent
	Thirst	Normal	More than normal	Unable to drink
	Urine	Normal	Small amount, dark	No urine for 6 hours
LOOK	Condition	Well, alert	Unwell, sleepy or irritable	Very sleepy, unconscious, floppy or having fits
	Tears	Present	Absent	Absent
	Eyes	Normal	Sunken	Very dry and sunken
	Mouth and Tongue	Wet	Dry	Very dry
FEEL	Breathing	Normal	Faster than normal	Very fast and deep
	Skin	Pinch goes back quickly	Pinch goes back slowly	Pinch goes back very slowly
	Pulse	Normal	Faster than normal	Very fast, weak, cannot be felt
	Fontanelle (in infants)	Normal	Sunken	Very sunken
TREATMENT		Mild diarrhoea — Train Mother to give plenty of fluids to prevent dehydration ORS packet may be given Continue feeding.	Moderate — diarrhoea Health worker to give ORS packet to correct mild to moderate dehydration. Special drink to be prepared if ORS Packet not available. Continue feeding	Severe diarrhoea — Give ORS and go to Health Centre to give I.V drip to treat severe dehydration Continue feeding

Source : Adapted from Plan A, B & C recommended by WHO

HOW TO ASSESS YOUR PATIENT

		A	B	C	D
1. Ask About	Diarrhoea	Less than 4 liquid stools per day	4 to 10 liquid stools per day	More than 10 liquid stool per day	Longer than 3 weeks duration (chronic diarrhoea)
	Vomiting	None or a small amount	Some	Very frequent	Blood or mucus in the stool
	Thirst	Normal	Greater than normal	Unable to drink	
	Urine	Normal	A small amount, dark	No urine for 6 hours	
2. Look At:	Condition	Well, alert	Unwell, sleepy or irritable	Very sleepy, unconscious, floppy or having fits	Severe under-nutrition
	Tears	Present	Absent	Absent	
	Eyes	Normal	Sunken	Very dry and sunken	
	Mouth and Tongue	Wet	Dry	Very dry	
	Breathing	Normal	Faster than normal	Very fast and deep	
3. Feel:	Skin	A pinch goes back quickly	A pinch goes back slowly	A pinch goes back very slowly	
	Pulse	Normal	Faster than normal	Very fast, weak, or you cannot feel it	
	Fontanelle (in infants)	Normal	Sunken	Very sunken	
4. Take Temperature					High fever—38.5°C (or 101°F) or greater
5. Weigh if possible		No weight loss during diarrhoea	Loss of 25-100 grams for each kilogram of weight	Loss of more than 100 grams for each kilogram of weight	
6. Decide		The patient has no signs of dehydration	If the patient has 2 or more of these signs he has some dehydration	If the patient has 2 or more of these danger signs he has severe dehydration	If the patient has chronic diarrhoea, severe undernutrition, or high fever, treat or refer to _____ for treatment. If there is blood or mucus in the stool and high fever, suspect dysentery and treat with antimicrobials.
		Use Plan A	Use Plan B	Use Plan C	

For Treatment of Plan A, Plan B and Plan C refer "TRAINING OF DOCTORS ON – TREATMENT OF DIARRHOEAL DISEASES & PROGRAMME MANAGEMENT" prepared by National Institute of Cholera and Enteric Diseases (ICMR), Calcutta, in consultation with the Ministry of Health & Family Welfare and D.G.H.S., Govt. of India.

THE PROBLEM

Nearly 145 million people are living in the known endemic goitre region, mainly in the Sub-Himalayan areas. These include the states of J&K, Himachal Pradesh, Arunachal Pradesh, Assam, Nagaland, Manipur, Meghalaya, Sikkim, Tripura, Mizoram, Union Territories of Chandigarh and Delhi, and 20 districts of Uttar Pradesh, 5 districts of West Bengal, 13 districts each of Bihar, Gujarat and Punjab, 6 districts of Maharashtra, 12 districts of Madhya Pradesh and 1 district each of Haryana, Andhra Pradesh and Kerala. Nearly 40 million people are estimated to be suffering from endemic goitre.

Endemic goitre is said to be of public health importance when 5 per cent or more girls aged 12-14 years show grade I enlargement of thyroid gland, and there is high incidence of cretinism, deafmutism, myxoedema, thyrotoxicosis and mental retardation.

Deficiency of iodine leads to goitre. When goitre occurs in a significant number of people in a defined geographic area, it is known as endemic goitre.

SOURCES OF IODINE

Sea foods, vegetables grown on iodine-rich soil. Water contains small traces. Milk, meat and cereals. Some green leaves especially spinach.

THE PROGRAMME

The National Goitre Control Programme was launched at the end of the second Five Year Plan. It has three main components:

- Survey of goitre in suspected areas to identify and assess its prevalence.
- Production and supply of iodised salt to endemic areas to prevent and control goitre.
- Resurvey after 5 years of continuous supply of iodised salt, to assess the impact of the programme.

PRESENT STATUS

Several salt iodisation plants have been set up with the assistance of UNICEF. Salt is iodised at 25 p.p.m. and sold at the same price as common salt.

PROBLEMS

- 1) The actual production of salt is inadequate.
- 2) Its transportation has suffered because of non-availability of required number of railway wagons.
- 3) Inadequate monitoring of the programme at state level due to non-existence of a goitre cell.

- 4) The district civil supply authorities have not exercised direct control over the salt nominees, resulting in poor supply of gunny bags and poor lifting of iodised salt by these nominees.
- 5) The Prevention of Food Adulteration Act (PFA) has not been enforced by the state health departments resulting in the entry of non-iodised salt in the endemic areas.
- 6) Unsatisfactory cooperation extended by the endemic states during surveys.
- 7) The ban notification, a prerequisite to the supply of iodised salt, has been held up.

In the seventh plan, this programme will be mounted on an extensive scale through coordination of the activities of all concerned agencies. The primary thrust of the programme would be iodisation of all edible salt on a time bound basis, so as to ensure its availability to the community throughout the country by the terminal year of the Seventh Plan.

HANDOUT 5.8.1

Sexually Transmitted Diseases Control Programme.

Sexually Transmitted Diseases Control Programme which was instituted as a Centrally Aided Scheme in 1956 with the objective of reducing morbidity and mortality associated with S.T.D., initially emphasised opening up of STD clinics throughout the country during the successive plan periods.

During the Sixth Plan, as a purely Central Sector Scheme, the Programme envisaged establishment of:-

1. Five Regional Teaching-cum-Training Centres.
2. Five Regional S.T.D. Reference Laboratories.
3. Five Regional Survey-cum-Mobile STD units to cater on a zonal basis and
 - a) development of health education activities with regard to STD and
 - b) establishment of VDRL at district hospitals and PHCs for speedy identification of cases and commencement of treatment.

During the VII Plan, the scheme functions as a purely central scheme with an approved outlay of Rs. 100.00 lakhs. The present plan envisages to continue the ongoing/unaccomplished components of the VI plan.

HANDOUT 5.8.2

Sexually Transmitted Diseases

I. CLASSIFICATION

Major diseases

Syphilis, Gonorrhoea, Chancroid Granulima inguinalae or Donavanosis Lymphogranulima venereum (LGV)

Minor diseases

Scabies, pubic lice, Herpes simplex

Importance

Syphilis—neonatal deaths mental diseases blindness.
Gonorrhoea—salpingitis—sterility in 3% urethritis.

EPIDEMIOLOGICAL FACTORS

Social Factors

- a) Prostitution
- b) Broken homes.
- c) Easy money
- d) Emotional immaturity
- e) Sub-normal intelligence
- f) Sexual disharmony
- g) Urbanisation and industrialisation
- h) Population mobility
- i) Greater sexual encounter
- j) Changing sexual patterns.

Mode of Transmission

Direct contact.

Incubation period

Syphilis	10-90 days
Gonorrhoea	2-10 days
Chancroid	1-5 days
L G V	1-6 weeks

III. CONTROL OF STD

1. Case Finding

- a. Contact Tracing
- b. Cluster Tracing
- c. Screening of special groups e.g. Pregnant women
VDRL Test is done at PHCs and district hospital.

2. Case Holding and Treatment

The basic strategy in STD control involve case holding and treatment of patients and suspected patients and their contacts. Complete and adequate treatment must be given. The methods of Treatment in respect of the STDs are outlined below.

- a) Syphilis. Pencillin remains the drug of choice for all forms of syphitis. So far *T. Pallidum* have not acquired resistance to it. An effective blood level (0.03 unit of penicillin/ml of serum) must be maintained. Single intramuscular injection of 24,00,000 units of Benzyl-benzathine penicillin G produces the required serum penicillin concentration of 0.03 unit/ml. for about 10-15 days. For treatment of patients who are allergic to penicillin, the drugs of choice are tetracycline hydrochloride and erythromycin. The recommended schedules of treatment for syphilis are given in Tables I and II.
- b) Gonorrhoea. No form of treatment can be guaranteed to give 100 percent cure rate. Penicillin remains the drug of choice because of its effectiveness as 'one-shot' treatment, rapidly bactericidal, cheap, easy to administer and non-toxic. A single large dose of penicillin given with procaine and probenidol seems to fulfil these criteria most closely.

Currently, two single-dose regimens are recommended:-

- (i) aqueous procaine benzyl penicillin, 4.8 million units given intramuscularly with probenecid 1 g. orally simultaneously.
 - (ii) ampicillin 3.5 g. single oral dose plus probenecid 1 g. orally, Gonococci producing betactamase (penicillinase) have been isolated from patients who still presented symptoms after treatment. It is therefore recommended that patients should be given a further clinical and laboratory examination 7 to 14 days after penicillin treatment. Those from whom a positive culture is obtained after the lapse of time will need treatment with an antibiotic other than penicillin. At present, Kenamycin or spectinomycin (2 g intramuscularly in a single dose) is the only antibiotic for patients in whom treatment with another drug has failed.
- c) Chancroid. One gram of sulfafurazole or 500 mg of tetracycline administered orally, 4 times daily, has proved to be effective treatment for chancroid. Longer acting sulfonamide preparations such as triple sulfonamides or sulphadiazine instead of sulfafurazole, are also being used by experts.
 - d) Lymphogranuloma venereum. Tetracycline is the drug of choice. The recommended dose is 2 g daily for 15 days or longer. Good results with sulfonamides given by mouth in a dosage of 2 to 6 g daily for 5 to 14 days have been reported.
 - e) Donovanosis. The treatment of choice is tetracycline in a dose of 500 mg 4 times daily for at least 10 days. Ampicillin 2 g orally daily for 2 weeks also affect a cure. Streptomycin has also been tried with success.

3. CONTACT TREATMENT/EPIDEMIOLOGICAL TREATMENT

Administration of full therapeutic doses of antibiotics to persons recently exposed to STD. Laboratory Tests and venereological examination and tracing of the contacts should follow the treatment.

4. FOLLOW-UP

- a) Syphilis. All cases with early and congenital syphilis should return to serological tests 3,6 and 12 months after treatment.

Patients with syphilis of more than one year duration should also have a repeat serological test 24 months after treatment including CSF examination during the second year.

- b) Genorrhoea. 7-14 days after treatment a clinical and pathological examination should be done. Urine should be examined for small mucus threads. Women should have at least two negative cervical tests (smears and cultures).

5. PERSONAL PROPHYLAXIS

- a) Mechanical — rubber condom is effective only for the covered parts. The diaphragm is also effective for covered parts.
- b) Chemical — not yet available
- c) Vaccine — not yet available
- d) Wash — wash the genitaria with soap and water immediately after the intercourse.

6. LEGISLATION

The purpose of legislation should be to encourage patients to seek early treatment and name their sexual contacts.

7. SOCIAL THERAPY

STD are social problems with medical aspects. Social measures are:-

- a) Rehabilitation of prostitutes
- b) Provision of recreation facilities
- c) Provision of decent living conditions
- d) Marriage counselling and premarital examination.

8. HEALTH EDUCATION

The aim of health education is to prevent the spread of infection by educating the patient to accept responsibility of ensuring that his/her partner attends the clinic. Health education should be directed against high risk groups. It should also include sex education.

SYPHILIS

Table I. Penicillin based treatment schedules

	<i>Benzathine penicillin G</i>		<i>Aqueous procaine penicillin G</i>	
	<i>Total dose (million units)</i>	<i>Total No. of injections (one per week)</i>	<i>Total dose (million units)</i>	<i>Total No. of injections (one a day)</i>
1. Early syphilis (primary, secondary, early latent i.e. not more than 2 years duration)	2.4	1	6.0	10
2. Late latent syphilis and late benign syphilis	7.2	3	9.0	15
3. Cardio vascular syphilis and neurosyphilis	—	—	12.00	20

Table II Treatment for patients allergic to Penicillin

		<i>Tetracycline hydrochloride (500 mg by mouth 4 times per day)</i>		<i>Erythromycin (500 mg by mouth 4 times per day)</i>	
		<i>Total dose</i>	<i>days</i>	<i>Total dose</i>	<i>days</i>
1.	Syphilis—less than 2 yrs. duration	30g	15	30 g	15
2.	Syphilis—more than 2 yrs. duration	60 g	30	60 g	30

HANDOUT 5.8.3**AIDS—Acquired Immuno-Deficiency Syndrome**

The publicity given to the high mortality associated with Acquired Immuno-Deficiency Syndrome – AIDS—could create an unnecessary and unwarranted scare in the minds of the public. It is necessary to create awareness regarding the disease among the health professionals and also among the lay public in order to prevent panic and hysteria.

There is no evidence of the existence of AIDS in India; nevertheless, it is imperative to utilise this international 'Catastrophe' to bring home some important health messages which will not only help prevent 'AIDS' in India but will also generally promote desirable health practices. Health professionals in the country must be prepared to cope with social issues arising out of AIDS such as:

- (i) Confidentiality of diagnosis.
- (ii) Maintenance of human dignity of affected persons.
- (iii) Help protect human rights i.e. children's rights to education, equal opportunities for jobs/employment, housing, availability of health care etc.

There is no magic bullet for the treatment of AIDS, however, as informed citizens we must recognize that our great enemies are 'The Virus, Ignorance & Blatant Prejudice'.

1.What is AIDS?

Acquired Immuno-Deficiency Syndrome is an illness in which the body's immune system (its natural defence against infection and disease) is destroyed to a great extent. Our body has an army with various weapons of its own that protect us from invaders like germs from outside as well from those who have turned against the body like cancer cells. Because of 'AIDS' the body is not able to fight the diseases and becomes defenceless. Such a person becomes susceptible to 'opportunistic infection' with organisms which do not cause disease in normal health persons and may develop diseases such as pneumonia, white patches inside the mouth and nodules in the skin.

The signs & symptoms of opportunistic infection can be divided into:-

- (i) Central Nervous System pattern.
- (ii) Gastrointestinal pattern
- (iii) Pulmonary pattern
- (iv) Fever of unknown etiology.

2. What Causes AIDS?

AIDS is caused by a virus which infects white cells in the blood.

Not everyone with the virus develops AIDS – or even falls sick.

Very few get the full-blown disease – only about 10 out of 100 persons on the average who have the virus develop the syndrome; and 25 persons have mild symptoms and the remaining are free from symptoms.

3. How Do You Diagnose AIDS?

AIDS is difficult to diagnose. The tests include complex blood tests. The diagnosis is based upon a spectrum of signs, symptoms and various laboratory parameters.

4. What are the Early Signs & Symptoms?

- (i) Significant & unexplained weight loss.
- (ii) Swollen glands.
- (iii) Fever & night sweats & malaise.
- (iv) Persistent watery diarrhoea.
- (v) Oral or/and oesophageal candidiasis.

Having any of these signs and symptoms does not necessarily confirm the diagnosis of AIDS. They may occur in other diseases as well.

5. What is the Incubation Period?

The incubation period is the time between the entry of germs and appearance of symptoms and signs of the diseases.

The mean incubation period is about 29 months in adults and about 12 months in children; however, some cases with shorter incubation periods or longer incubation periods upto 5 years have been reported.

6. Who are the Group 'At Risk'?

- (i) Homosexual & bisexual men having a large number of different sexual partners.
- (ii) Drug users who use common syringes for injecting drugs.
- (iii) People who receive transfusions of blood or blood products i.e. haemophiliacs and persons with coagulation disorders.

- (iv) Babies born to mothers with AIDS.
AIDS primarily affects young adults.
AIDS is not confined to homosexuals.

It has the potential to affect a great many people.

7. How is AIDS Transmitted?

Transmission requires intimate and not casual contact.

- (i) Sexual contact.
- (ii) Sharing contaminated needles.
- (iii) Multiple transfusions of blood or blood products.
- (iv) Transmission from infected mother to child before, during or shortly after birth.

AIDS is transmitted through: excretions and secretions of body fluids i.e. blood, semen, saliva, stool, urine. AIDS is not transmitted through casual normal social contact.

AIDS is not transmitted through sneezing or coughing.

AIDS is not transmitted through kissing unless there is a cut or laceration on the lips, mouth or tongue.

AIDS is not contacted through second-hand garments.

AIDS is not contacted through shaking hands etc.

7a. Does a Condom offer any protection?

As in the case of sexually transmissible diseases a condom may provide some protection against AIDS.

8. Is there a Cure for AIDS?

At present there is no certain cure for AIDS.

There are no effective drugs available at present but several drugs are under investigation.

9. Is AIDS Fatal?

So far a full-blown case of AIDS has always proved fatal.

10. Is there a Vaccine against AIDS?

A vaccine is seriously considered as the best solution to combat this disease—but so far this has not been developed. There is hope that it may be produced soon.

11. What should one do to avoid developing AIDS?

If you are in a high risk group:—

- (i) Have regular medical examination.
- (ii) Avoid repeated exposure to Sexually Transmitted Diseases.
- (iii) Avoid sharing of needles to inject drugs.
- (iv) Do not have many sexual partners.

- (v) Use condoms.
- (vi) Avoid oral and anal sex.
- (vii) Do not share razors, tooth brushes etc. which may be infected.
- (viii) If you are seropositive:—

Always inform the health personnel whenever you need their help so that they could take appropriate precautions.

12. **How to prevent the spread of AIDS?**

- (i) If women are carrying AIDS they should not conceive as there is sufficient evidence now to indicate that the infection is carried to the foetus.
- (ii) Imported blood products should be certified as free from AIDS virus/antibody contamination.
- (iii) Keeping check (by education/persuasion) on known drug dens having admixture of foreigners.
- (iv) Checking up of all haemophiliacs.
- (v) Checking up of all female & male prostitutes.
- (vi) The High-risk group people must avoid infections particularly those of sexually transmitted disease.
- (vii) Drug addicts must avoid sharing of needles.
- (viii) Homosexuals should be advised not to have different sexual partners.
- (ix) Those who belong to high-risk group must not donate blood or semen.
- (x) Surfaces which are contaminated with blood must be properly cleaned and decontaminated.

13. **Some Dos & Don'ts for Health Care Personnel:**

- (i) Sterilize needles and syringes.
- (ii) Handling of blood, secretions & excretions from AIDS patients requires gloves & gowns if there is danger of contamination of clothes.
- (iii) Protective goggles should be used if there is likelihood of secretions splashing into conjunctivae.
- (iv) Materials sent to laboratory for testing must be appropriately marked to allow adequate protection of laboratory workers.
- (v) Any equipment/clothes etc. in contact with blood, secretions, excretions of AIDS patients must be carefull decontaminated.
- (vi) Rigid isolation of patient in one room is not necessary.
- (vii) Check that imported blood products used in the treatment of haemophiliacs and other patients have been certified as free from AIDS virus/antibody contamination.
- (viii) Educate Blood donors:
 - (a) High risk group should not donate blood.
 - (b) Those who have HTLV-III seropositivity, syphilis serology positivity or antibodies to hepatitis-B virus or cytomegalo-virus should not donate blood.
 - (c) Educate voluntary donors for self-exclusion.
- (ix) Avoid non-essential use of blood or blood products.

